

LAND TENURE AND AGRICULTURAL PRODUCTION IN THE TROPICS

Being a Discussion on the Influence of the Land
Policy on Development in Tropical Countries.

BY

H. MARTIN LEAKE, Sc.D. (Camb.)

Author of "Foundations of Indian Agriculture."

THE subject of the development of the Tropical Dependencies of the Empire is shown to depend in large measure on the policy adopted with regard to the land. Starting with a discussion of the theoretical aspect of the subject of land in its relation to the human race, the author outlines a policy which appears most adequately to supply all the requirements for the progress, both moral and material, for which modern ideas as incorporated in the Covenant of the League of Nations, places the responsibility on the sovereign power.

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THE FUTURE OF TROPICAL AGRICULTURE

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and Principal, The Imperial College of Tropical Agriculture, Trinidad.**

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“The reasons which form the justification of property in land are valid only in so far as the proprietor of land is its improver In no sound theory of private property was it ever contemplated that the proprietor of land should merely be a sinecurist quartered on it.”—*Mill*.

“Illiterates have now a just complaint that education leads to belittling and ignoring the native rulers.”—*Speech by Chief Ofori Atta, C.B.E.*, quoted by Sir F. Lugard in *The Dual Mandate*.

“It is one of the defects of our system of State departments that the invaluable lessons of Indian administration and economic progress—the result of much costly experience and research—and the history of its successes and failures, are not more readily accessible to other tropical dependencies, which are emerging from the state in which India was many years ago.”

PREFACE

I HAVE attempted to discuss the subject of land tenure not as an isolated question, but in its relation to the general problem of agricultural development in our tropical Empire; and if the following pages indicate my own personal conviction that a triple partnership in the land holds out the brightest prospects for the moral and material progress of the tropical dependencies, I trust it will be recognised that these views are not put forward in any didactic and uncompromising spirit. On the one hand, land tenure is a subject, in itself, full of complexities; on the other, it constitutes a problem on which it is extremely difficult, if not impossible, to generalise. This difficulty must arise where such divergent conditions of climate and such divergent races of men are involved.

To discuss the problem in its application to the varying countries which come within the British sphere of influence would be too vast a task and one which I, certainly, am not qualified to undertake; for it is a task which requires a local knowledge of each and every country considered, and this knowledge I do not possess. I have been compelled, therefore, to confine myself to generalisations and must leave the individual application to others. If this wider perspective helps to throw light on the problems which arise in practice, if the discussion merely helps towards stimulating thought on these problems, even though that thought be severely critical of the views expressed, I shall be content.

It may be held by some that my views are visionary; that the possibility of raising up a landlord class, capable of performing effectively the functions assigned to it, is asking too much of human nature. I can only say that the process will be slow, but that I can see no greater intrinsic difficulty in this than, for instance, in inculcating a widespread spirit of co-operation. Both are dependent on an educational system differing in form from the literary type which is now generally adopted. And surely it is easier to influence by education a relatively small

and selected group than to influence the main bulk of the population. The metayer system of the continent, as far as I have had opportunity of studying it, works effectively if, and when, the landlord himself takes a personal interest in his estate, but the application of the system is limited. No educational policy has, as far as I am aware, ever been attempted to stimulate that interest.

My faith does not entirely lack a foundation in experience. In 1914, I was placed in charge of the Agricultural College at Cawnpore at a time which coincided with the reorganisation of that College. It was possible, therefore, to influence the policy of that institution, to attempt to attract to it members of the land-owning classes and to bring to the notice of these the opportunities that lay at their doors. In the short time that has elapsed, these efforts, combined with the willing co-operation of the members of the department at work in the districts, have, I am inclined to think, produced an effect which is not negligible. I may be optimistic, I may underestimate the time factor, but I do not think I am visionary.

No apology is, I think, required for the repeated references to India and Indian experience. It is in India that we have the longest record of a highly organised and vast agricultural population, and it would be worse than folly to ignore that experience with its successes and its failures. I count it a fortunate circumstance that I have had the privilege of serving nearly a quarter of a century in that country and the opportunity of observing the different phases of the land problem there illustrated.

I am indebted to the Empire Cotton Growing Corporation for permission to reprint an article which appeared in its review, and deals with the question in its African bearing. This appears as Appendix I. For permission to reproduce the articles which appear as Appendices II and III, and are taken from the *Agricultural Journal of India*, I am indebted to the courtesy of the High Commissioner for India.

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CHAPTER I

THE ECONOMIC POSITION OF LAND

FROM the earliest of times of which records exist, land has been the subject of discussion. It has been a form of wealth of which persons and communities have, throughout historical times, desired the possession. Wherever a population has settled and numbers have increased a division into two, a landed and a landless section has arisen, and from time to time the right of ownership is disputed. The dispute centres on the economic significance to be given to land as a form of wealth, and any system of land tenure involves the acceptance of one or other view in this age-long dispute. It is incumbent, therefore, on anyone who is rash enough to discuss the subject, even though he cannot settle the dispute in question—a result impossible of achievement—to indicate what attitude he takes on these fundamental questions. Though by so doing he may render his whole argument nugatory to a section of persons who dispute his axioms, he will give a sure basis to those in agreement with him to follow him to his conclusions.

As the world has developed, then, land has been accepted as a form of wealth which may constitute personal possession. The contrary view is that land is an exceptional form of wealth. Being the gift of nature, it is the property of all men equally and cannot legitimately become the property of the individual, to be used and to be disposed of as his own interests dictate. Land is here distinguished from other forms of wealth as the gift of nature; in other, and plainer, language, it is a form of wealth which is limited in extent and cannot be appreciably increased in quantity by the labour of man. This statement is no doubt true; for though there are records of land reclamation, as in the Netherlands, such reclaimed areas are insignificant in comparison with the land surface of the earth as a whole. The argument here hardly admits criticism. But, in

its ultimate aspect, the world with all that is on it, air, water and so on, is limited, and it is merely a question of degree; the relation of the quantity available to the population creating the demand. It is only necessary to visit the less accessible and less populous portions of the world to discover the fallacy underlying any attempt to draw a fundamental distinction on these grounds. The argument finds its origin in those purely philosophical discussions about the equality of man in which the philosophers of the 18th century were so keenly interested. Unfortunately, these philosophers did not hesitate to apply their conclusions, based on theoretic assumption, to the practical aspects of life and, in doing so, laid the foundation of a definite policy with regard to man's relation to the land which, when considered in the light of practice, may be classed as revolutionary. This is not a philosophical treatise and the falsity of the assumption of an original equality in man cannot be argued here. The question of the status of land is, on the contrary, an economic one, and forms the basis of any system of land tenure; it must, therefore, be argued.

Land, as has been stated, cannot be distinguished from other form of wealth on the grounds that it is limited in extent; nevertheless, there must be some distinction. For no fallacy, especially when it bears on a point so fundamental to the welfare of the human race as the relation of man to the land on, and by which he lives, could recur persistently from generation to generation and from century to century unless there were an underlying substratum of truth. That substratum of truth appears to be this; land differs from most other forms of wealth through the possession of not one characteristic, but two. Still more fundamentally, of course, it is the basis for economic plant growth on which the whole animal world depends for its subsistence. Apart from this, land is limited in extent, but it is also immovable. It would seem, moreover, that, in the past, it is the second characteristic rather than the first that has given to land its unique position. The importance that should be attached to them has not until recent years been accorded to the subjects of transport facilities and of density of population. Locke, it is true,

refers to the population question, but appears to have considered a 100 per cent. increase to be the limit and that there would, within that limit, be no pressure on the land. The ideas formulated by Malthus were yet to come. Of the writers of the eighteenth century, Rousseau, whose works are best known, and whose views influence opinion even at the present time, had a limited knowledge of the world as a whole. These writers were unacquainted with, or failed to realise the importance of, the vast and thinly populated areas which improved transport facilities were then beginning to open up; they based their views on experience drawn from the relatively dense population which, combined with the immobility characteristic especially of agricultural populations, arose in Europe from the lack of such facilities. The industrial development was still in the future, and the call of cities gave but little relief to an excessive agricultural population.

This industrial development, in itself dependent on improved transport facilities, has created an enormous landless population which relies for the necessities of life on agricultural produce. Those wider and undeveloped areas have become an asset to humanity and, as the mountain cannot come to Mahomet, Mahomet has been compelled to go to the mountain. Improved transport facilities have, in fact, to a large extent removed, at any rate for the time being, the limited nature of the land area from among the causes for distinguishing land from other forms of wealth. Of the two characteristics of land above mentioned its immobility has temporarily become the predominant one.

The conclusions implicit to this immobility require to be considered further. If those relatively unimportant cases, where land has an aesthetic appeal, be excluded, land as such has little or no intrinsic value. Such value as it possesses is consequent on its capacity to produce articles of real value, crops, timber or stock. But land of itself has not necessarily any inherent capacity to produce such articles. Such a capacity is dependent on definite qualities which may or may not be present in the land itself, qualities which may be summed up in the one word fertility, and certain other qualities

external to the land itself, which may be summed up in the word climate. It is, thus, the conditions of vegetable growth, rather than any peculiarity of the land itself, that gives to it its value. Further, that value must remain potential unless two further conditions are fulfilled. Labour is required to secure the potential wealth which it is within the capacity of the land to produce, and the means for bringing that wealth to the market where its value can be realised. The value of land is conditional on these factors, one or more of which may be lacking. They fall into two natural groups; those conditions which can, and those which cannot, be altered by man. Land, therefore, as such, has little or no intrinsic value; it possesses a potential value, in the first place, dependent on the possession of those natural but uncontrollable amenities requisite to plant growth and, in the second place, varying with the degree to which, and the facility with which, the controllable conditions are capable of modification. It becomes of real value only when the former conditions are met and the latter conditions have, when necessary, been supplied.

But behind all these is the question of markets—the demand for produce—ultimately a question of population. The population of the world is ever increasing, and were it fully mobile the economic problem of land would be simplified. But it is not mobile, and this for two reasons. Diversities of race exist and, important among these, are those diversities which constitute climatic adaptation. It is no more possible to transport the inhabitant of the temperate zone to a permanent life under tropical conditions than it is possible to effect the reverse process. Again, life has become highly specialised to a degree which renders a radical change of occupation impossible. Carr Saunders, even more clearly than Malthus, brings out the fact that the population is in the position of a spring under compression, the compressing force being the means of subsistence. In the days when the feudal system was in force in England this control was, in the agricultural community direct, marriage being dependent on the availability of a home. The slow rate of increase in population in England before the industrial revolution, and up to the present day in backward communities

as in Central Africa, illustrates the same phenomenon. The rapid growth of the English population since that development only too clearly shows the potential capacity for increase when the compressing force is removed. The development is a complex one; a case of action and reaction. The industrial revolution, a term originally applied by Napoleon to the process of replacement of manual labour by the machine, could not have proceeded far if its early application had not been directed to transport. It is the increased facilities in that direction provided by the steam engine that has permitted the aggregation of large masses of humanity into industrial areas, for it is by means of these facilities that the necessary food supply is rendered available. Conversely, it is the steam engine that is responsible for opening up hitherto inaccessible areas and has permitted a flow of population to these. It is the facilities thus provided for a flow of population in one direction and a flow of produce in the other that has temporarily released the spring and rendered possible the large increase of population that is characteristic of the last and present centuries.

The developments here referred to, scientific, mechanical and last but, not least, medical—for on this depends the immunity from disease of large and closely aggregated masses of population—have had their origin in the temperate areas, especially in Europe, and, of the European countries, in England. They have largely overcome the immobility which earlier characterised those populations and have given rise to an outward flow to the less populated areas. But such flow has been in the main confined to temperate climates, which are adapted to the racial characteristics to which reference has already been made. Who can doubt that at no distant date, not perhaps in the life of the individual, but in the life of the community, an increasing population will reimpose a tension on the spring which must lead to a limitation to the rate of increase? Is not the movement in this direction already apparent in the immigration laws recently introduced into America? America, with its wonderful development of population, has long passed the stage of production merely to meet the needs of the individual

communities of the Old World. It has become an industrial community itself and tends more and more to absorb its excess agricultural produce. Japan illustrates the same phenomenon, while America's immigration policy can only accentuate the position in those countries of the Old World which found in immigration the safety valve for their own excessive population.

There is yet a long way to go before the situation becomes acute. There are still vast areas awaiting development and population, even in the temperate climates, and there is much room for enhanced production in a change from extensive to intensive farming in those portions of the temperate world which are already occupied, though it is open to question whether this latter development offers a real solution; it results in a larger yield it is true, but it requires a larger population with a higher standard of living than meets the needs of extensive farming. Finally, there remains the tropical areas of which, until recent years, only the fringe had been developed. Here, however, the problem is of a different nature, for the first of the causes of immobility, to which reference has already been made, comes into play. The nature of the temperate races renders them unsuited to manual labour, more especially agricultural labour, under a tropical sun. Development, therefore, is dependent on coloured labour, and it is this factor that adds complexity to the problems of land when applied to the tropics.

It can hardly be questioned that human nature is fundamentally similar whatever the race and whatever the climate under which it exists. It is subject to the same rules of increase, and that increase is limited by the same factors in the case of tropical races as in the case of temperate races. Civilisation, however, has not proceeded as far in the former, as in the latter case, and the limiting factors have come into play at an earlier stage. Thus ultimately here also the food supply as the limiting factor is shown by the density of population bearing a rough proportion to the fertility of the land. Especially is it shown by the effect of a failure of rain on a fertile tract, as in Bengal, where such failures are rare. This effect is written large in the famine of 1776-77 in Bengal, where over 10 million perished of starvation in a single year. But it is doubtful if

the food supply is frequently the immediate cause. The tropical races as a rule are backward in civilisation. The exact definition of this word is difficult, but here, perhaps, its interpretation is best indicated as the organisation of the community for social service. Such service implies the subordination of the individual, to the communal will, and it implies a strong and effective executive. It implies, further, a degree of permanence which permits of the development of those peaceful activities which may be summed up in the word arts. In the course of history there have been in tropical and sub-tropical countries, numerous instances of strong executives. The Incas of Peru, the Acztecs of Mexico, the Matabele of South Africa, the Hindu, and later the Moghul Empire of India, but none of these have had the permanence of European development, nor did they develop the arts to the same degree. In Europe, it is true, there have been changes in executive, but throughout these, from early Greek through Roman, and down to the present times, there has been a continuous development of the arts, which has received but little check from the various political upheavals. Prominent among these developments, and important from the present aspect, are those which concern transportation, the building of roads, the perfecting of the compass, the evolution of the steam engine and, later, of the internal combustion engine, for it is these that have rendered the aggregation of large masses of humanity into cities possible. Of secondary importance only is the progress of medical science which, through its sanitary and hygienic services, has prevented the wholesale destruction of such communities from disease. The development of the tropics, therefore, differs from that of the temperate zones, where progress in one direction has proceeded *pari passu* with progress in the other. It takes the form of the direct application, with an ever-increasing degree of intensity, of the most recent methods to primitive organisations. Everywhere railways are being thrust into the interior, motor transport is being developed to penetrate the more isolated tracts, and medical science is rapidly exercising a control over the diseases which have scourged the tropics and, in the past, played a large rôle in

checking the growth of population. Finally, an alien control has gone far to remove the perennial strife which has formed a third check to that growth. Can it be doubted that, under the changed conditions, a rapid increase in the population of the tropical races will be the response? Has not this already occurred in India? and, just as the American immigration laws are the first sign of an anxiety over the population question, is not the "native question" of South Africa the recognition of a similar problem arising out of the increase among the native races of that country?

To anyone who really thinks over, and ponders, these facts there is only one conclusion. The present conditions to be found in tropical countries are temporary. Increase in population will alter the entire aspect of the situation, and the consideration of the problem of tropical development as a static one can only lead to future difficulty. As far as it is humanly possible to see, the temperate zones will remain the centres of industrial development, while the tropical zones will develop agriculturally, providing in ever-increasing degree the requirements in food and raw material of the industrial populations further North and South. Agricultural production, however, is the winning of wealth from the land by means of labour. For the exercise of that labour an incentive is necessary, and that incentive is a retention of a portion of the fruits of that labour. Land is an essential item in the economy of production and, as such, it becomes a desirable asset, and the system of land tenure becomes of primary importance. The general paucity of the populations relative to the area and fertility of the available land, and the general backwardness of those populations, as exhibited in the smallness of their material requirements, give to the land a value altogether disproportionate to that which is intrinsic to it. The margin between actual and productive, or intrinsic, value is sufficient to attract the speculative element in human nature. Further, the pressure exerted by the demand for raw materials for industry and to feed the industrial populations leads in most cases to the adoption of the means calculated to produce those raw materials most rapidly. These means are not necessarily those best calculated

to meet future developments; they are adapted to the present existing conditions which are only temporary, and ignore the inevitable change which a population increasing in numbers and material needs will bring about.

Land then, differs fundamentally from other forms of wealth in none of the characteristics by which wealth is usually defined unless, perhaps, that it is of prime importance to the conversion of inorganic into organic, and in consequence, must be the ultimate factor controlling the development of the human race. But the time when that consideration will become generally effective is sufficiently remote to remove it from the sphere of practical economics under the modern conditions of improved transport. The importance that attaches to the problem of the land arises rather from the fact that it owes its present value to a cause which is not the permanent or ultimate one. Population has reached its final point of equilibrium neither in numbers nor in distribution, and the value of any particular land will vary with the changes which the future holds in store in these matters. The problem is a dynamic one, and this is a fact which any system of land tenure must take into account. Human nature being what it is, production, even of the essentials to life, will only be achieved if an attractive return is obtained for the labour involved; and it is the system of land tenure which largely determines the distribution of the rewards of labour. A sound system of land tenure, therefore, must not only provide for an equitable distribution of these rewards among the parties concerned, but it must be flexible and capable of securing that equitable distribution under the changed conditions that must inevitably arise in the future.

II

Land, with air and water, forms the inorganic basis from which all organic and living matter derives its existence. It is the vegetable kingdom, however, which alone is capable of converting the inorganic, non-living, into the organic and living; and it is on the vegetable kingdom that all animals, man included, ultimately depend for their subsistence. But in the

case of man it is not all and every form of vegetation that serves for direct nourishment. A certain, and comparatively small, number of plants are of such direct service to man, while others are of value only indirectly through intermediate animals, the flesh of which forms food material for carnivorous man. Nature, however, is not selective and, if left to herself, produces but a small supply of the economic plants and a supply sufficient to meet the needs of only a small and primitive population. From the earliest times man has learned the art of preserving seed of these economic plants, of clearing land in which to sow that seed and of storing the produce of the crop so obtained; he has learned the art of plant propagation so as to multiply up those species which are best produced vegetatively, and he has, further, applied these arts not merely to plants which form his immediate food, but to those which form the food supply of certain animals. He has further learned the art of domesticating animals, thus augmenting his food supply directly with a ready source of flesh, milk, and eggs, and indirectly with a source of power which enables him more effectively to cultivate and to produce crops. It is not necessary to follow these developments in any detail; the important point is that, once man passed out of the primitive condition when he lived on the collection of the produce of nature, he committed himself to a life of labour and, with that commitment arose that very human characteristic, the desire to reap the reward for that labour. And, inasmuch as a period must elapse between seed time and harvest while any considerable bulk of grain, even only that amount necessary to provide food from one harvest to the next, is not readily transported, the realisation of that desire is contingent on a security of tenure and a personal security in a comparatively immobile state. But such security is beyond the personal capacity and can only be achieved by joint or communal action. With the ever-growing number of individuals the communal organisation has become more and more complex until a government has come to be an entity distinct from the individuals whom it governs. It provides services to the community, and recovers from the community the cost of these services. In a self-sufficient and

comparatively primitive community the matter ends there. There are two interests, the personal, and the communal, between which the product of labour has to be divided, and it is in this division that lies the origin of land tenure. In its most elementary form it consists in an actual share in the produce but actual division is obviously capable of only a very limited application. As soon as the communal area becomes extensive, practical difficulties arise in the collection and transport of bulky produce; while too large a bulk of inconvertible and perishable goods becomes valueless. There has, therefore, arisen a tendency to replace direct division by a tax adjusted to the productivity of the land, and payable in some less bulky form than the produce itself, the form being cash where a monetary system is developed. The realisation of this tax, whether in kind or cash, implies an agency acting in the interests of government, and one not uncommon form of conducting that realisation is the farming out of the collection of the taxes to individuals. When the Government is strong, the tax farmer retains his position of agent, but when the Government is weak there is a danger and, in fact a certainty, that the tax farmer will assume the position of landlord. In other cases, as in the early Norman period in England, the Government assumes the form of an alien institution imposed on the community. As such it asserts the claim to full ownership of the land and alienates it to individuals of the dominant class in return for a contribution in armed retainers, maintained at the cost of the noble to whom the land is assigned. Here, again, the direct contribution of men becomes, with the changing conditions, an anachronism and the assignee drifts into the position of landlord at fee simple.

That these are consequential steps in the evolution of land tenure is not necessarily implied; the exact mode of evolution has been different in different countries. The important point, however, lies in the fact that, whatever the particular form of evolution, the end is, in the majority of cases, the same; a tripartite interest in the land, with a governmental, in reality a communal, a landlord and a tenant, interest. This may be considered the normal system. The proportionate

division of the produce is a matter of adjustment and dependent on circumstances, the essential factor being the necessity for the actual labourer to retain in his possession a sufficient proportion of that produce to act as a stimulus to action and a reward for his labour. From this normal, divergencies are to be found varying in degree as one or other of the partners fall out of the picture.

In England, the communal interest has disappeared and, where Government holds land, it occupies the position of landlord. Here, of the three interests, two only, the landlord and the tenant, remain. The evolution of rural development in England, however, has given a further turn to the English system. The tenant's holding is commonly too large to be worked on the family basis; the tenant "farmer" is forced to employ additional labour which he hires. While in England, therefore, a three-party system has again arisen in that three interests, the landlord, the farmer and the labourer, are concerned in the division of the produce, these three parties arise by a reallocation of the functions of the original two. In all but the simplest forms of agriculture the tendency for such a reallocation is apparent, and the paid labourer is never entirely absent, but it is only under certain systems that the labourer assumes an economic importance entitling him to be considered a separate interest. In describing, as is here done, the English system as a dual system, this distinction requires to be borne in mind.

In such cases land ceases to be a direct source of revenue to Government and, as Government has to be financed, other sources have to be sought. In the case of England, industrial development has provided a large volume of floating wealth which is readily taxable; but, even here, the income tax forms an indirect means of taxing land in as far as it applies to incomes derived from land. In America, the compelling force in the early days was the need for settlers, and these could only be attracted by freehold grants. The need for revenue, however, outstripped the industrial development of that country, and the tax on property, including real estate, of which land was the major item, is again an indirect method by which Government

secures to itself part of the value of the produce; the essential distinction between such indirect taxes as the income tax in England and the property tax in America, and a direct tax, under what has been termed the normal organisation, lies in the fact that the two former taxes are based, not on any real or potential productive value, but on market value either for rent or sale. As methods of estimation for taxation purposes, both are open to criticism. An income tax, as far as it deals with land, takes into account rentals; but rentals may, through pressure of population, be forced up from a fair value to the economic limit. A property tax, based as it is on the value at which land changes hands, does not, in the case of individual properties, respond to periods of agricultural prosperity and depression; while it may give an adequate share to the Government in times of prosperity, it is inequitable to the individuals in times of depression, and under such conditions there is always a lag. The history of the American property tax during the period of depression following the war is a clear indication of this fact.

Again, the tenant may fall out of the picture; as occurs in many cases where land has passed into the hands of estates and companies. Labour here becomes landless and ceases to reap a reward directly dependent on production. The labourer is paid a fixed wage which is determined more by competition for the available labour than by the value of the produce. It is found in its maximum intensity in those tropical areas where labour is scarce, and is replaced to a large extent by mechanically directed operations. It is found, too, where crops are of a nature unsuited to tenant cultivation, such as tea, cacao or coconuts, owing to the length of the period they require to mature.

The weakness of such a development in an agricultural country lies in the stagnation that must result in a labouring and landless class. There is no ladder by which the more enterprising can rise to a better position in the agricultural community, the gap between the labourer and the estate holder being too great to be bridged by individual effort; there is no outlet in industry, and the only outlet that does exist lies in such spheres as the law, medicine or in Government service.

The landlord again may fall out of the picture, leaving the Government and the cultivator alone interested in the produce. In many countries the Government's interest may be strictly limited to the receipt of a definite, and frequently nominal, tax; but, in its purity, this development imposes no such limitations. It is, perhaps, best seen in the "rayat-wari"* tracts of Central and Southern India. Here the land is subjected to a periodic settlement at which the proportion of the production value to be paid as revenue is determined. The cultivator here holds his land directly from the state and, of necessity, such a system is characterised by small holdings.

Lastly, as an extreme development of the last phase, both Government and landlord fall from the picture, and we have left a cultivator with a freehold on the land he cultivates. Such is the position in the lowlands, and such is the position aimed at in the countries of the Near East, particularly in Roumania, as the result of the post-war Agrarian Revolution,† though, in this case, restrictions on the freehold are placed in the matter of sale and sub-division.

In all cases where small holdings become dominant, the practical problem is that of capital. Capital on an individual basis is hardly available; security is not of the type acceptable to ordinary banking business. Its supply in adequate quantities is dependent on a co-operative organisation, and co-operation again has to be called in if the produce is to be handled under modern marketing conditions. Successful co-operation, however, involves a higher educational standard than is to be found in primitive communities, and it is only where a robust and self-reliant agricultural community exists that it stands reliably on its own feet.

Large areas of the tropics are undeveloped and inhabited by backward races having a primitive social organisation and the most rudimentary outlook on economic problems. The views on land and its relation to the people on it are equally elementary. Into this elementary organisation are being

* From "Rayat," or cultivator; opposed to "zamindari" tracts, from "zamindar," or larger land-holder. See Chapter 2.

† *The Agrarian Revolution in Roumania.* Evans.

thrust the latest developments of modern civilisation; the indigenous population is being asked to produce the requirements of the more advanced communities of the world while its own requirements are small and readily satisfied. The inevitable tendency of such external pressure must be towards that system of development which will give the largest immediate yield of exportable produce; a development which treats the problem as a static one. It by no means follows—it would, in fact, be nearer the truth to say that it would be wrong, to assume—that such a system of development is best suited to the solution of the dynamic problem involved. It may, and almost certainly will, create a condition difficult, if not impossible to adjust with equity when the modern forces of civilisation, among the most powerful being education and sanitation, acting on an increasing population, have had time to take effect.

An ounce of practice is worth many pounds of theory, and it is fortunate that that practical experience lies ready at hand. In India, a dual has in part passed into a triple partnership in the produce of the soil; in parts a dual partnership still remains; the internecine strife between petty potentates has yielded more than once to an alien power; population has largely increased—from 200 to over 300 million in the last 50 years—and the country has been opened up by the development of some 38,000 miles of railway, with the result that the markets respond to world forces. Over large tracts the “normal” system as described above has held the field throughout these vicissitudes. Its study should be instructive. It is particularly instructive because, with the historical records available, the problem can be studied as a dynamic one. The record, it is true, is intermittent and, before Akbar, particularly limited; but in the *Ain i Akbari*, and from the earliest records of English occupation, a very full account is available; certainly no similar record is available for any other country situated under tropical conditions. A brief review of the Indian experience and history forms the subject of the next chapter.

CHAPTER II

THE INDIAN TENURE SYSTEM

THE central fact of Indian land tenure is that Government has retained a share in the produce of the land, a share which is represented by a land tax. To the two parties found elsewhere as having common interest in the land, the landlord and the tenant, a third party, the Government, is then added. This third party's interests may be limited, as in the case of Bengal where, towards the end of the 18th century, in 1793, a permanent settlement was introduced; and in this case the conditions approximate to those of England, the main difference being that the datum line for the landlord is not zero, but starts at a certain calculable figure. Security is not affected, and the economic reflexes in connection with land are the same as in countries with the better known systems. Land value appreciation can be calculated as certainly in Bengal as in England, and land becomes an item for speculative action. On the other hand, as over the rest of India, this third party's interest may be unlimited and is determined by assessment. This assessment is subject to periodic revision, and the broad idea is that the third party, that is, Government, shall receive a fixed percentage of the production value; shall receive, that is, a proportionate part of the incremental value of the land. Obviously, under these circumstances, the speculative value of land is reduced and a very different economic balance is arrived at.

The value of the study of the Indian system, however, is not limited to the mere study of the system. The interest is equally centred in the history. The land system of India is not only unique; it has been in operation, with of course modifications, but with the same fundamental principles, for over 500 years, as long, in fact, as records of historical value are available; it has passed through various vicissitudes and survived

dynasties and has proved itself flexible. The last three quarters of a century has witnessed many changes. It has witnessed the opening up of the country by railways so that the independence of local markets has been replaced by a dependence which has resulted in a single market for staple agricultural produce; it has witnessed the establishment of a reign of peace with security for the population with, as a result, the development of the habit of carrying over the excess production of one year to the next and, as a further result, the stabilisation of prices; it has witnessed later the establishment of a world's market, and prices are now determined by that market; lastly, it has witnessed the economic upheaval due to the war with its large inflation and subsequent deflation of prices. It has witnessed, and successfully survived, all these vicissitudes; it has avoided the agrarian depression characteristic of post-war England as well as the agrarian revolutions characteristic of the Eastern European States. There must be something intrinsically sound in a system which survives all these economic changes; something which makes it especially worthy of study.

It is, perhaps, hard to visualise India in the earliest times. The absence of any currency system implied payment to the sovereign power in kind, and the lack of the means to transport bulky produce further limited the distance from which revenue payable in such a form could be drawn and a consequent limitation of the size of the kingdom. The very use of the word kingdom conveys a false impression; the king, or Raja, to use a better indigenous title, in fact, approximates to the owner of land of greater or less extent from the cultivator on which he draws his revenue on a system similar to the metayer system, but he differs in the fact that he owes allegiance and pays tribute to no overlord or state. There are, thus, only two interests in the land, the superior, Raja, in some cases almost worthy of the title of king, in others little more than a land owner, and the cultivator.

These conditions undergo a change with the advent of the Mohammedan dynasty—a foreign dynasty securing power by invasion. A large portion of Northern India is now welded

into a unit by the Moghuls with a centralised government on a truly imperial basis. The Rajas, hitherto independent, are reduced to a status of dependence, but the process is one of absorption rather than of conquest. They pay tribute and thus occupy positions between feudatory chiefs and land holders. The economic organisation of the country is left otherwise with small interference and here, for the first time, a tripartite interest in the land arises, the central government, the zamindar—a distinctive Indian word it is hard to replace in English parlance without raising confusion of thought—and the cultivator.

Interest further centres on the Moghul revenue system which, first planned by Sher Shah and later perfected by Akbar, was carried to a high degree of efficiency. The system was founded on a very detailed survey of the resources, the ownership of land, qualities of the land, the area cultivated and the crops grown, and had for its culmination an assessment of revenue to be paid. It was administered by a body of officials, not unchecked by a system of espionage, responsible for the revenue according to the assessment.

As designed and administered by Akbar the system was an admirable one, aiming at realisation of the necessary revenue in proportion to capacity to pay; it aimed at stimulating an extension of cultivation and was undoubtedly a system far ahead of any revenue system of its period. It was, however, dependent on a strict control of the local official and a strong head to the Government. In places the primitive nature of the transport facilities rendered control of the distant portions of the Empire difficult and the effectiveness of the system varied inversely with the distance from the seat of Government; in time, Akbar passed away and was succeeded by a series of Emperors having neither his capacity, his wisdom nor his moderation. With the break-up of the Moghul Empire abuses broke out, local officials became more exacting while remitting less of the proceeds; the former Rajas also, where possible, reasserted their independence and India gradually drifted back into the chaotic state from which the Moghul dynasty had rescued it.

In this condition of chaos a common change effected was for the weakening central authority to farm out more and more the collection of its revenues. The collection of the revenue by servants paid at a fixed salary requires an efficient supervising agency if abuses are not to creep in; the system of farming out gives less trouble to the central authority but throws open the door to abuses by the local agents. Further, it gives to one who is not familiar with the history, the impression that the agent is something more than a tax collector, though it may be something less than a landlord. This false impression is emphasised by one further peculiarity of Indian custom, the tendency for such posts to become hereditary. This phenomenon is indigenous and acceptable, opposed as it is to English ideas; it is still recognised, even at the present time, as legitimate.

This, briefly, was the condition of the country at the time of the English occupation, and, if later developments are to be understood, the conditions of that occupation must be studied. This occupation was, primarily, a trading venture, carried out by a corporation, on which the vicissitudes of the country thrust the onus of Government. The servants of the East India Company were not selected for, or trained in, the art of government; further, they came from a country with very different ideals as to the possession of land, from a country in which the landlord was the central figure of agricultural economy. Under the circumstances it is hardly surprising that they failed to realise the position and, thinking in terms of the English system, attempted to find persons having a claim to the status of a landlord. In the circumstances described, it is hardly surprising that considerable confusion arose. It has been seen how the independent "Raja" continued in a subordinate position under the Moghul dynasty and subsequently regained to a greater or less extent his independence, and it has been seen how a body of rent collectors, by an entirely different process, attained an almost identical status which, to the new-comer, simulated that of a landlord in the English sense.

The early settlements that were made were coloured by this search for a landlord, and men holding their positions on one

or other of these different grounds were accepted as such. On the other hand, in a country almost completely agricultural, the revenue must be derived from the land, and consequently the fundamental conditions of Akbar's system were adopted. These were:—

- (1) the determination of the revenue at a fixed percentage of the gross production of the soil;
- (2) the determination to be made by a process of assessment subject to revision.

If, then, the first effect was the determination of rights of ownership; the second essential, the determination of the facts of production, the area under cultivation, classes of soil, crops grown, irrigation facilities and so on, were not overlooked, and the foundation was laid for the very elaborate system now in force. Failure to distinguish between the Indian tripartite, and the English dual system* of interest in the land, however, led to an important development in Bengal. Here the English view predominated. The idea of a land revenue was not entirely discarded, but it was held that if this were fixed in perpetuo a race of "yeomen" farmers would arise to give stability to the country. The contest of ideas ended in 1793, with the permanent settlement of Bengal. It is, perhaps, fortunate that experience of a permanent settlement was thus early acquired on a limited field for the result has not been that anticipated by the protagonists of such a settlement. Land in Bengal received by this settlement a speculative value which was early seized on; but it built up, instead of a yeoman class, a system of absentee landlordism, the owners living on their rental, the collection of which they farmed out. Practically the whole cultivation was effected on a system of tenantry, while the increasing population, due to a settled country and to the lighter incidence of famine owing to improved communication, caused a competition for land which enabled rents to be forced up to the maximum. In its result, therefore, the permanent settlement has proved a mistake; agriculture is of

* Vide Chapter I, p. 12 for grounds for referring to the English system as a dual system.

the crudest and the agricultural population backward both morally and materially.

The best illustration of the subsequent development of the Indian system is to be found in the United Provinces of Agra and Oudh which lie to the West of Bihar and Orissa, and of which the easterly districts formed part of Bengal and came under the terms of the Permanent Settlement.* This province includes the city of Agra, and is bounded on the west by the Jumna on the right bank of which is situated Delhi. These two cities were the main seats of government of the Moghuls and the western districts of the province therefore, illustrate the Moghul system in its fullest development. In the United Provinces land is found held directly by the cultivator himself, but is also found held in areas of ever-increasing size up to the extensive Taluqdari estates, the largest of which occupy many hundreds of square miles. In all but the smallest units cultivation is carried out on a system of tenantry, though the owner frequently retains a certain small area for direct cultivation.

With these complex conditions, the earliest settlements were of necessity far from precise, and the time of their application was limited to a period of five years, when a further settlement was undertaken. The necessity of collecting data soon became apparent, and in 1822 a commencement was made in building up a system of detailed surveys and valuations. The system, however, proved too cumbersome and broke down, a simpler system being introduced in 1833, a settlement running for a period of 30 years. In the period that elapsed after 1833, during which these first settlements were made, the main point of interest is to trace the effect that was produced by the different economic views as to the position of land. In the earlier stages the general tendency favoured the ideas which found their full expression in Bengal; the individual claims to extended areas were looked at with distrust, those of the claimant to a limited area, and so likely to develop the "yeoman" idea, were favoured. Throughout the Agra Province,

* Those who desire a more detailed account should consult *Land Revenue Administration of the United Provinces*, by W. H. Moreland.

therefore, where these earlier settlements were made, the small or medium estate generally predominant is found. By 1856, when Oudh was annexed, the pendulum had swung in the opposite direction and, in consequence, Oudh is, generally speaking, a province of large taluqdari estates. In spite of these differences the principles of settlement have remained constant to the present day and such changes as have been made are in the direction of improved method.

Before the question of revenue and settlement is left, there is one further point which requires to be considered, namely the proportion of the produce which government appropriates and the principles which underly its estimation. For this purpose it is unnecessary to go further back than Akbar. He fixed the revenue assessment at 90 per cent. of the assets, and on the following basis:—

“There shall be left for every man who cultivates his land as much as he requires for his own support till the next crop is reaped, and for that of his family and for seed. This much shall be left him; what remains is land revenue and should go to the public treasury.”

This quotation only too clearly indicates the Moghul conception of a dual partnership in the land, the state and the cultivator, a conception which allows no place for a landlord. The interpretation which has been given as to the origin of the landlord in India, namely, an English imposition on an indigenous system, is in accord with the conditions here indicated. It is, however, somewhat surprising to find the same authorities at one and the same time advocating a landlord system, to be built up by permanent settlement, and realising 90 per cent. of the assets; all the earlier English settlements up to 1822 adopted the 90 per cent. basis of the Moghuls. In 1830 the percentage was reduced to 80 per cent., and later, in 1855, to 50 and, at the present time it lies between 45 and 50, though, in practice, it approximates to the lower figure. The double partnership of the Moghul period with a division of the assets in the proportion of 9:1 could hardly have expanded into the triple partnership of the present day. The proportion of 1:1

has rendered this possible; the 50 per cent. share providing a sufficient income to support two parties. In fact, at the present time, by far the greater proportion of the zamindar's asset takes the form of rent. So far merely the revenue aspect of the Indian system has been considered and in doing so attention has been drawn to the gradual development of a tenantry sharing that fraction of the produce of the land left by Government with the revenue paying landlord. Here again the history of the development is of interest. Government's claim on the land is now defined at a certain share of the produce and its interest, therefore, is limited to seeing that that produce is the maximum that can be secured under the conditions; economic factors do not enter into the picture. The division of the produce as between landlord and tenant is subject to no such limitation; the ordinary rules of supply and demand apply here. It is true that in the earlier times the general system was a payment of rent in kind, by an actual division of the produce, a system known as "batai" and corresponding to the metayer system of the continent. It is true that that system, based on a certain proportionate division of the actual produce, appears to be free from subjection to the rules of supply and demand and to be a fair rent. In practice, however, this is not so; apart from the simple procedure of altering the proportion and of the division in favour of one partner or the other, the history of "batai" in India illustrates a limitless number of expedients devised by the stronger partner to increase his share in the division. Cess is added to cess; delays in making weighments and introduced; landlord's subordinates are quartered on the tenant indefinitely and so on. Even "kankut," an estimation of the standing crop, that refuge from the simple division of the actual harvest produce is not free from abuse inasmuch as it places the onus of all errors in estimation on the single party. "Batai," therefore, gradually gave place to cash payments, but even these are susceptible of abuse when there is not equality of freedom in bargaining. Revenue is assessed, as has been seen, at a certain percentage of assets, which include rentals, and it is, therefore, of benefit to the zamindar to keep his rentals low. This can be accomplished by such subterfuges as granting

renewals of leases at the old rental subject to the tenant giving at renewal a "nuzur" or gift which may amount to an appreciable addition to the rental.

The key to the position lies in the degree to which equality of the two parties, the zamindar and the tenant in their capacity to bargain is maintained, a degree dependent on the demand for land. It is in this respect that history proves of such interest. In the early days of small Rajas, days of constant strife and rapine, the relation that existed between the tiller of the soil and the Raja was something more than that between landlord and tenant. It partook of a feudal nature. As in early feudal times there lay a community of interest between the two in the demand for self-protection. The Raja was unable to bring too great a pressure on the cultivator for fear the latter would leave him and migrate to a neighbouring and more lenient master. True freedom of bargaining existed owing to the abundance of land; competition lay, in fact, for cultivators between the owners and not between cultivators for land. In the feudal times, in England, artificial restrictions against freedom of movement, against the erection of houses, thus limiting marriages and so on, to a large extent broke down the balance of power between the over lord and the tenant before the natural increase produced a competition for land; and subsequently the industrial development has created a trend towards the towns which has broken down that bias in the landlord's interest, and at the present day competition for tenancies barely exists in England. In India the reverse is the case. Settled conditions, restriction of famine by improved transport facilities, and well-organised sanitary and medical services have combined during the last century so to reduce the death rate of a fertile community that, with the relatively small* openings for industrial development, pressure on the land has become intense. It is not too much to say that a cultivator's main dread in life is eviction. Certainly expropriation is one of the severest penalties that can be imposed on the tiller of the soil in these parts.

* Numerically large, but in a population of over 300 million relatively small.

The history of tenancy legislation, of the rent acts as they are termed, during the English occupation is instructive, but can only be interpreted by their key; that the acts are designed to meet the successive stages of a development in which an increasing population, with no outlet in industrialism or emigration in any degree proportionate to its numbers, has progressively reduced its freedom for bargaining for the possession of land to cultivate. The laws of supply and demand have placed the zamindar landlord, whose origin has been traced, in a position to force rents up to the full economic limit. Now a full economic rent means a cultivator, on the margin of subsistence and with little incentive to produce the full potential return from his holding. The effect of the economic conditions, thus, is to injure the third party's (Government) interests and successive rent acts are efforts on the part of Government to redress the balance of power in bargaining.

At the commencement, however, as with the revenue legislation, earlier acts were an attempt to incorporate the custom of the country. As has been seen, the whole development was in an evolutionary stage, and custom can hardly be said to have crystallised out. The first real tenancy law, passed in 1859 and limited in its application to the Province of Agra, must be considered as an attempt to incorporate past custom rather than an attempt to regulate the balance of power between landlord and tenant. From the English standpoint, however, it did weigh the scales materially in favour of the tenant for it conferred on all tenants who had, at the time, held their land for a continuous period of twelve years, what was termed a right of occupancy. This right consisted of a permanent right to possession, provided the rent was paid, and it at the same time limited the power of the zamindar to enhance the rent. The act further contemplated the period of twelve years as a probationary one for new tenants, after which occupancy rights could accrue. The object of the act was to secure, in an area where pressure of population was already beginning to be felt, a sufficiency of continuity to ensure to the cultivator the reaping by himself of the reward of his own energy. In practice it went too far; it raised the hostility of the zamindari

class, some members of which adopted active steps to break down such rights as had accrued, while many more prevented further accrual of occupancy rights by giving leases for periods under twelve years, on the expiry of which fresh leases were issued with little, if anything, more than a formality of ejectment.

In the case of Agra, the effect of the tenancy legislation weighted the scale by the act of 1859 too heavily in favour of the tenant who was in the fortunate position of securing occupancy rights. The value of those rights may be gauged by the fact that, of two tenants occupying neighbouring fields of the same agricultural value, one, the non-occupancy tenant, will pay a rental it may be twice as much as that paid by the neighbouring tenant holding occupancy rights. The main feature of subsequent legislation in Agra, consequently, was the narrowing of the difference between occupancy and non-occupancy rights. The act of 1859 was subjected to several amendments, but was not drastically altered till 1901. This act introduced, as an alternative to occupancy tenure, a leasehold tenure. Under it a zamindar can give a lease of seven years which will not count towards the accrual of occupancy rights. It is an attempt to give the maximum of security of tenure with greater freedom for the zamindar in the adjustment of rents.

At the time of the annexation of Oudh, as has been seen, a different view was taken with regard to revenue legislation; a similar difference is to be found in tenancy legislation. The large "talukdar" was, subject to payment of revenue according to the assessment, restricted in but the slightest degree in relation to his tenantry. The first Oudh rent act is dated 1868, and gives practically full scope for the play of economic forces such as competition for land and consequent forcing up of rents. The main amending act was passed in 1886. As an example of an effort to counterbalance the favourable position in which the talukdar was placed, owing to pressure on the land, by his unrestricted capacity for forcing up rents, this act is unquestionably great. Under it a cultivator on admission to a holding became a lease holder for a period of seven years, during which

seven years his rent is fixed; after seven years an enhancement, limited to a fixed increment of 1 anna in the rupee (16 as 1 rupee) is permitted while, if ejectment was enforced, the taluqdar suffered a pecuniary loss to Government. In theory the act gives considerable and adequate protection to the tenant. It is not, however, invulnerable. Already it has been learned how, while it is possible to keep the same paper rental on the record, a "nuzur" or gift may be demanded as a condition of renewal; a transaction which does not appear on the official record. Again, though the land holder (talukdar or zamindar) is in law liable to penalties, in practice he was in a position to break the law with impunity. A knowledge of the social conditions is required to make this comprehensible, and such a knowledge can hardly be attempted in these pages. Pressure of population and the demand for land have, in fact, proved too powerful for the act of 1886. It has remained, however, for the post-war legislation in 1923 to amend this act.

This brief outline of the history of land tenure in India, if it has proved successful in its object, will have shown the various acts in their real light as palliatives of an unbalanced condition, due primarily to increased population. The fundamental condition for a sound relationship between landowner and tenant, freedom of both parties to bargain, is lacking. The general tendency of the acts, as an attempt to rectify this balance, is to give a fair degree of security of tenure with a limited capacity for raising of rents. It brings the story up to the war period and the subsequent period of inflation with high prices for agricultural produce. It is true prior to the war the trend of agricultural prices had been upward, due to the influence of a swing over from local to world markets, but the change was gradual and not more than could be adjusted at each settlement period of thirty years without an economic upheaval. The post-war enhancement of prices was abrupt.

The landowners, as a class,* relying hitherto on rentals and

* This statement possibly requires qualification. There are numberless instances of landowners who do take such an interest, especially of the agricultural castes such as the Jats; but as a generalisation it is true, and especially when applied to the larger landowners.

taking little direct interest in the land, discovered that the restrictions on raising rents prevented them from securing the proportionate share of the increased prices, and there arose, somewhat suddenly, a desire for the establishment of farms of a considerable magnitude, the profits from which, being cultivated by paid labour, would accrue to the landowner himself. Prices rose too rapidly for intermittent adjustment on a thirty years basis to be effective without economic dislocation. Now the defects of palliative legislation became apparent. In Agra especially, owing to the establishment of occupancy rights coupled with the scattered nature of the holdings, in few cases was the landowner in a position to get a consolidated block of even one hundred acres which he could develop as a farm on modern lines. In Oudh, legislation was undertaken while the movement was in full flood, and special facilities were granted for the reabsorption of land by the landowner for such purposes.

The moral to be derived from the history of Indian legislation with regard to the land is readily drawn. From the revenue aspect it is clear that a settlement, allowing for readjustment every thirty years, is sufficiently flexible in normal times as it allows for the assessment and realisation of the third party's fair share of the produce without economic upheaval. In abnormal times, however, as the war experience has shown, it fails to secure that fair share. One other point of danger has to be indicated; the system has undergone trial only during a period of gradually advancing prices due to the standardisation to prices in the world's markets. Further enhancement is not likely except as the result of greater productivity, the result of intensive cultivation. A system which has proved satisfactory under such favourable circumstances will at least require watching when the conditions become stabilised. Its intrinsic soundness under all conditions has still to be determined.

From the tenancy aspect the history is even more illuminating. The acts are, as has been said, attempts to hold the balance between the landowner and tenant to establish equality in bargaining. From the very fact that economic changes produce different relationships between the two parties an act

designed with such an object will not be universally applicable in place or time. The weakness of such acts is that they assume antagonism between the two interests, and by that very assumption they tend to create and perpetuate such antagonism. Here lies the crux of the position. No assessment and no rental system can be sufficiently flexible to meet all the fluctuations of seasons and prices. The landowner, if he is to reap the rewards of agricultural improvements, must be brought directly into the organisation for production and not merely function as a rent collector. Agricultural development requires capital which the landowner and not the cultivator can provide, and it requires vision which the cultivator has not. The future of Indian agriculture has yet to be worked out.

Broadly speaking there are two distinct systems in India, the "zamindari" system, typified by large landlords or zamindars, leasing out to "rayats" who cultivate; and the "rayatwari" system, where the large estate is absent, the "rayat" or cultivator holding his land direct from Government. The former is typical of the parts of India which have been the especial subject of consideration, the latter is found typically in Southern India. Where the "zamindari" system holds the war has, as has been said, stimulated a direct interest in agriculture among the zamindars. Many have started "home" farms and have invested capital in their estates in such matters as wells; there is a definite inclination for the younger generation to seek an agricultural education, and this has to be designed to include such subjects as the relationships between landlord and tenant. In the "rayatwari" tracts there is no potential source of capital such as is to be found in the zamindar and his practical interest in his estates; the capital and credit required for development has to be sought elsewhere in co-operation. The history of the co-operative movement in India is in itself a subject worthy of detailed study, but this cannot be undertaken here.

If this cursory summary of agricultural development in India with special reference to the revenue and tenure systems brings out any point it is the essentially human influences that form the motive power in that development. The very human

desire to secure as full a proportion as possible of the return of the land, whether by the zamindar or tenant, has necessitated legislation designed to restore the freedom to bargain which an increasing pressure of population had restricted; and a similar desire has resulted in an increasing interest being taken by the zamindar in his estates. Recent events have stimulated into activity a true triple partnership the future of which in part depends on economic conditions, but in part is capable of guidance by a sound educational policy for that part of population having direct rural interests.

CHAPTER III

TROPICAL DEVELOPMENTS AND ITS REQUIREMENTS

AMONG the facts which characterise the development of the human race, two stand pre-eminent; life has a material basis which can not be ignored, and the motive for human activity is to be found in the reward reaped. The former of these two facts is true though, in the complexities of modern civilised life, that truth is obscured and frequently overlooked. Certain minimum material requirements are essential if there is to be realised that happiness of the individual which is, perhaps, as long as it is compatible with his position as a member of a community to which he owes certain duties, the main object of civilisation. That minimum is not a constant; it varies both with the physical condition of life and with the stage of educational and intellectual development of the individual. In a community low in the scale such requirements are limited to little more than food and clothing, in tropical countries frequently a negligible item, and shelter, to which may be added a few crude utensils and implements. In advanced communities the requirements become infinitely more complex, and it is not possible, therefore, to say with regard to any particular article or product that it is a necessity or a luxury; what may be a luxury for one may be a necessity for another individual. But at the base of any list of necessities of a community or individual will be found food, clothing and shelter, the basis of the two former being agricultural in origin. Speaking of the world generally, therefore, agriculture is, and must remain, a fundamental activity of the human race. But while this is true generally, it is not necessarily true locally. Civilisation is not a development of uniform growth, the extent of the growth varies in different localities. Those localities where civilisation attains its

highest form are characterised by a large industrial development necessitating aggregation into small areas of a population whose essential requirements, especially those of agricultural origin, are derived from external sources and are paid for by the products of industrial labour. Modern development has, in its recent phases with sanitation, health movements and protection of child-life, resulted in such an increase of population that it is now necessary to go far afield to secure both the necessities of life and the raw material for industry. Already the tropics have been brought under the spell and tropical development is, for good or ill, the inevitable outcome of that increase of population. The whole tendency of modern life is towards a separation of the industrial and agricultural areas of the world. With the exception of India, which has already embarked on a career of industrial development, a response to the rapid increase of population of that country, it is in the temperate zones that industrial development has taken the firmest hold. This does not imply that agriculture will cease to play its part in temperate development, it must always form an important, if not the most important, single activity of the inhabitants of the temperate zones for wheat, the basal food of the population, is of temperate origin. It does mean, however, that the immediate and, for an indefinite period, the vastly preponderating development of the tropics will be agricultural. An attempt will be made for a moment to picture the economic forces operating in a tropical area which is newly exposed to the pressure of the external forces of world development and an attempt will be made first to visualise the conditions on which these forces will react, but which are prevalent before these begin to operate.

In such an area there is a population limited by the restraints of the natural and human forces to which it is exposed; a population of greater or less density according to the kindliness of those forces. In the long run it is the natural forces which predominate, for the pressure exerted by them is continued throughout the centuries; human pressure is intermittent in its incidence, and losses are soon made good through

the natural fertility of the population. Essentially the pressure of the natural forces is a question not merely of rainfall but of regularity of rainfall, for on this regularity depends the capacity of the soil to yield a regular supply of food. In a well-watered tract, where rain failure is unknown, population will not be limited by the food supply. Increase is only limited directly by the food supply when, in such a region of assured rainfall, an exceptional failure of rain occurs. Famine then operates, and its intensity is directly proportional to the rarity of the occurrence. This is well shown in the famine of 1776 in lower Bengal, to which reference has already been made. A tract only exceptionally subjected to failure of the monsoon, a fertile soil capable of supporting a dense population, a country not yet opened up by means of communication so that relief by the importation of food from without is impossible, these are the conditions under which a double failure of crops, due to the failure of the rains, led to famine in its severest form and an actual loss on this occasion estimated at some ten million lives. Where, however, the rainfall is a less certain quantity the check to increase is less dramatically, but none the less certainly, applied, and the more densely populated tracts are invariably tracts of sufficient and certain rainfall.

Bengal, however, is peculiar; the home of an old civilisation long settled on a fertile soil with a highly developed system of agriculture, the population had to a large extent mastered the forces of nature and had succeeded in extracting a return from the land sufficient to support its vast numbers. More usually the potential food supply is not the factor which directly limits the population. In the low lying rain belts of the larger tropical rivers, tropical vegetation is too luxuriant to succumb to the attacks of primitive man and, where he has succeeded in this struggle, lack of sanitation and hygiene has imposed, through disease, a limit to his increase which is further restricted by internecine strife between neighbouring races, slave raids and such like factors humanly imposed. Consequently, in such an area as is under consideration, population, whatever its density, nowhere approaches the

limit imposed by the potential capacity to produce food. Large areas remain undeveloped, and land itself has little or no value. Production, except in those cases where cattle constitute a form of wealth by which a man's status is judged, is limited to that which meets the needs of the individual and his family and of excess produce there is little or none, for there are no markets for its disposal. Tribal organisation exists to a greater or less degree, and land is frequently recognised as a tribal asset, at the disposal of the chief among members of the tribe, and under conditions which are fairly well recognised as tribal custom.

Into this stable organisation, stable only to the extent that it endures so long as the application of external forces does not break it down, is now thrust the influence of a demand for that produce which the tract is capable of yielding; a demand which has its origin in a distant land and is created by a people ignorant of the conditions of supply. The whole history of Colonial development, British or other, is the history of the search by the more highly developed races of the North for sources of supply of those products which their own countries could not produce. In the Middle Ages that source, for historical reasons, was India, the reputed source of all forms of wealth, but in those days the advanced communities of the North were self-supporting in the matter of food, and it was the demand for other forms of wealth that formed the main stimulus. Under the false economic doctrine prevalent at the time of the discovery of America, that the precious metals, merely by their possession, constituted wealth, attention was for the time being diverted to that continent, but, if temporarily eclipsed, India never entirely passed from men's minds, and the desire for a route to India free from the control of the powers bordering on the Mediterranean stimulated Vasco da Gama's voyage round the Cape in 1497, and stimulated also the numerous attempts to find both a North-East and North-West passage.

At that period, scanty attention was paid to the rights of the inhabitants of the countries newly found. No moral scruples, for instance, checked the Spaniards from removing the wealth of the Aztecs and the Incas; it was merely a question

of conquest by force in which the rights of the conquered received small consideration. Nor was Britain backward; starting later in the race under a policy which regarded a Colonial Empire merely as a source of supply of such products as she could not produce herself, she paid small attention to the unappropriated fields of North America, for these could only yield produce which entered into competition with her own products. Her main efforts were directed to ousting her rivals from those tropical possessions which yielded, the supply of the precious metals being exhausted, those products which she herself was incapable of producing. Thus she came into possession of many of the West Indian Islands which form some of the earliest of her tropical possessions. Similarly, at a later date and under the pressure of the demand for labour in the West Indies and the more southerly American colonies, she was forced to enter into the West African slave trade and, by the same process of ousting her rivals, established her footing on the West coast of Tropical Africa.

In all these developments there is little of morality or care for the conquered races. That comes later, and has only found its complete formulation in the Treaty of Versailles and the principle of Mandates. Article 22 of the Covenant of the League of Nations lays down the principle that the well being and development of peoples not yet able to stand by themselves under the strenuous conditions of the modern world form a sacred trust of civilisation. It is under the principles, so defined, that the pressure to produce more than meets the requirements of the local population has to be met. The implications of that principle are far reaching and impose definite limits to the methods which can be employed in securing that surplus.

It is time to turn to the second of the two facts mentioned at the commencement of this chapter—that the motive of human activity is the reward reaped. Even in the most primitive communities the individual is characterised by a certain acquisitiveness; if two persons offer to relieve him of that with which he is prepared to part, he will accept the offer which is, in his standard of values, the greater. His wants may be few,

his disposable produce small in amount, but, for such as it is, he will bargain to obtain the maximum possible in exchange. And what are the conditions under which that bargaining is conducted? The produce is required for the world markets and its price is determined with reference to those markets. Under the principle of free competition in trade, trading agents compete for the available produce, and the price they are prepared to pay on the spot is only limited by the amount which the produce will fetch in the open markets of the world less the cost of transport, agency charges and a reasonable profit. Where competition does not exist, that limiting price does not become effective. Thus, in parts of Africa during the post-war boom, traders were in a position to buy maize in the remoter villages on the same terms as had been current in the past, in spite of the great advance in price shown in the maize markets of the country. But such conditions are temporary, and competition soon arises. It may, therefore, be, and frequently is, the case that the native producer realises a considerable bonus which is over and above that return which is sufficient to provide him with the stimulus to produce. He becomes possessed of wealth in excess of that which is sufficient to meet his material wants, while, at the same time, he has no experience of real relative values. He becomes the prey of the petty trader, in Africa frequently of Levantine origin, who distributes trifles for which the price is determined not by their intrinsic values but by the purchaser's capacity to pay. The wealth, or a large part of the wealth, produced is of small benefit, either to the producer himself or to the community to which he belongs.

From this brief summary of the conditions which prevail in such a tract as has been assumed it is now time to turn aside and consider how such an area is to be developed if it is to play its part in meeting the world's demand for tropical produce, while concurrently the spirit implicit to the system of mandates, as defined by the Covenant of the League of Nations, is fulfilled. And here it may be said, in parenthesis, that that spirit is founded on moral issues and applies with equal force not merely to the territories actually mandated, but to those

in which authority is derived from other sources. For such a development to take place certain prerequisites are essential and must be provided. Of these the first, and prime, requisite is peace and orderliness; peace external, giving freedom from fear of attack from beyond the borders, and orderliness internal, assuring the individual security in possession as against force. Within the British Empire the former protection is, in the main, a function of that Empire, while the latter is a function of a local police force.

The second requirement is summed up in the word "judiciary," that group of activities which ensures to the individual security in possession against the less forcible, but more subtle, and therefore, perhaps, more dangerous, methods of undermining security. Thirdly, there is the requirement which is met by those activities to which the adjective "administrative" is usually applied. These include the maintenance of all records pertinent to the determination of ownership of fixed property, for it is not possible, in a community such as that which is now under consideration, with illiteracy prevalent, to rely on private agency to maintain this record even when, as is not infrequently the case, that ownership is fully individual and private. Not the least important of these records will be the record of the ownership of land and, since the rights to ownership of land are based on local custom, the study of such native custom falls within the administrative sphere. Subsidiary to, and arising out of, this requirement lie the means by which this registration is made effective, which, in the case of land, include a survey.

The above form a group of requirements by which is given that security and certainty which alone will induce the component units of the community to produce more than will satisfy their own immediate and personal needs. From them consideration passes to another group of requirements, those concerned with the actual mode of production. Even in its most elementary form agriculture is incapable of producing an immediate return in the sense that a day's wage is an immediate return for a day's labour. Before the reward

can be reaped a considerable time must elapse and a greater or less amount of labour be expended. That labour may be non-recurrent, as when employed in the clearing or levelling of land, or it may be recurrent, as in the preparation of the land for sowing or planting or in tending the crop, whether that be, as in the wilder regions, merely protection from wild animals or, as in more settled areas, some form of cultivation. During the period that must elapse till the harvest is reaped the cultivator has to maintain himself from other sources, and for this purpose he requires capital. Capital is, in fact, from this aspect, the requirement essential to production. It may be small in amount, merely the essential food to tide over the period between one harvest and the next together with the simple implements used by primitive man; it may be considerable, as in those cases where methods have progressed so far as to employ such implements as the plough, which are common features of country life in a country like England, and cattle or where the crop takes long to mature; it may be very large, as in the case of large scale farming, where operations are carried out by mechanical means. Given the population and the desire to produce, both of which are assumed to exist, whatever the method of production adopted, a certain amount of capital is obligatory, as obligatory for development as is security.

Since on this question of capital in great measure pivots the development possibilities of a tract, it must be considered a little more closely. In its simplest form the unit of cultivation is that which can be handled and worked by one individual with the assistance of the members of his family. As a self-contained unit the capital requirements are small, a few implements, a few cattle, a certain amount of seed. In a kindly climate not subject to droughts, such a unit is a feasible proposition, and the aggregate agricultural wealth of the country is built up of the aggregate production of such units each having a small capital need. In a less kindly climate the provision of wells may be desirable, and even necessary, but, under suitable and favourable conditions, this provision is not beyond the capacity of the individual,

though the capital required per unit is thereby enhanced. But, to use the effect of climate merely for the purpose of demonstrating a tendency which other factors can equally excite, it may be found more economical to conduct the water that will provide security against drought through a small irrigation system from a stream or to lift it by a small power plant erected on a better constructed well. Examples of the former are to be found widely distributed; as examples of the latter the "zamindari" well pumping schemes, which are becoming a feature in the plains of Northern India in recent years, and the pumping schemes along the Nile banks, where, however, the water is raised from the river and not from wells, are examples. In either case, a larger amount of capital is required than he who controls the unit area of production has at his command. Even more important than this, the improved facility in most cases applies to an area larger than the single unit and may involve rights over which the owner of that unit has no control. Herein lies one reason, from the economic standpoint, for the adoption of a larger unit of cultivation than has hitherto been considered; a new unit to which we may apply the term "estate."

Continual progress along this line of argument leads to those cases where the climate is so unkindly through lack of rain that cultivation is limited to a very short season crop, or may even be absent. In such cases, if there is an abundant supply of water as is given by a large river, and if the soil is intrinsically fertile, irrigation works on a large scale may become economically possible. The irrigation systems of the Egyptian Delta, of India and, of more recent date, of the Gezira in the Sudan occur at once to the mind as examples of this development. The construction of any system of this magnitude involves a heavy outlay of capital; and the area commanded transcends any ordinary conception of an estate. Relative to the country itself, the area is too considerable for the development of it to be left entirely in private hands, and that development must come under some form of public control.

The same sequence, though in a lesser degree, can be traced in the economic evolution, leading again to a demand for

capital which, however, is required not, as above, for means for rectifying climatic deficiencies, but to work up produce. The cane crop is of little value in itself, though a limited amount of cane will find a local market for chewing purposes; its main value lies in the sugar which is contained in the juice and which must be extracted and reduced to an imperishable form. The process is one of extraction, clarification and concentration of the juice, with resultant crystallisation of the contained sugar which can then be separated from the matrix. In its simplest form the equipment consists of a small crushing mill which can be operated by bullock power, an open pan for concentration of the juice, and perhaps a certain amount of fuel. These are all that are required, and they lie within the capacity of many cultivators working on an individualistic basis. By this means is produced a raw sugar, "gur" as it is called in India, Muscovado sugar as it is called in the West, though the terms are not entirely synonymous, and even "gur" itself is a very variable product. The limited demand for the crude forms of sugar, combined with economy in manufacture, leads to the smaller factory using a power plant for extraction, but retaining the open pan system for concentration, which is still found in many countries. Such a limited factory requires a supply of cane and a factory organisation beyond the capacity of the man who cultivates directly his own area, the estate stage, is reached. The introduction of the vacuum pan, with all the accessories to a modern sugar factory, which only works economically on a large scale, has raised the amount of capital required, and expanded the area it is necessary to command still further, till the interests of the community are involved and, as in Java, some form of public control becomes essential.

Production thus requires capital, and with modern developments, the tendency in modern production is a tendency towards a larger and larger demand for capital. It is a point which will have to be considered later; at the present moment a third group of requirements must be outlined if the development postulated is to take place. This development is based on the assumption that, for long, agricultural production will be the foundation of prosperity; the excess produce, over and above

that which suffices to meet local needs, provides the material, in exchange for which can be obtained those goods which are not produced locally, but for which there is a local demand. The locality is, in fact, not self-sufficing; external trade is a condition fundamental for development, and such trade implies an agent for its conduct. From the very nature of the conditions, in the first instance at any rate, that agent will be an alien; for a knowledge of markets, of systems of transport and of modern business organisation are essential to the successful conduct of such a trade. But this is not the only requirement. Agricultural production is diffuse; the products not only have to be aggregated, but they have to be transported to the ports of shipment while the goods for which they are exchanged have to be distributed. This problem of transport again resolves itself into one of capital and, as before, the various stages are distinguished by the amount of capital involved. In the simplest form of transport the produce is moved on the backs of animals, and we find almost every form of domesticated animal impressed in this service: horses and mules, as on the American continent; oxen, as in the Southern Sudan; camels, as in the desert areas of the Sudan and Arabia; sheep and goats, as in the trans-Himalayan trade between Tibet and India. Even man himself may be impressed into the service, as is the case still in many parts of Africa. These are the only possible means of transport where roads are non-existent, but, where the country permits, and wheeled traffic becomes possible, these methods are replaced by the ox wagon, as in South Africa. In recent years the evolution of the motor has provided yet another means of transport which finds economic employment in the wilder parts of the world, though the openings for such use are still limited. These methods show in the same ascending scale the need for capital, the simplest only lying within the means of the individual. But full development, that which comes from what is termed "opening up" the country, requires more effective provision for transport than these. Metalled roads, complementary to, and only effective when associated with vehicular traffic, which then ceases to be dependent on weather conditions, constitutes one method; a second being

railways, a self-contained system for the cheap conveyance of goods over long distances. Both these requirements demand capital in excess of the capacity of any individual or section of the community, and, moreover, they serve a vast number of individual units, the interests of all of which have to be considered and weighed. Only by some system of public control over the planning and construction of these lines of communication can those interests be impartially served, and only by such control can the necessary capital be attracted.

The above summarise what may be termed the essential requirements for development. They provide the security, the means of production and the facilities for marketing. It is impossible to omit from consideration certain subsidiary requirements for development, less fundamental in themselves, but by no means negligible, if progress is to be orderly and continuous. The fact that the produce finds its way to the world's markets leads to certain inevitable reactions at the source of supply. These markets are highly organised, the quality of the produce handled on them is usually rigidly standardised, and the standards are frequently determined by a highly intricate and technical system. Produce which is not "graded" to fit into the accepted standards fails to realise its intrinsic value until it is forthcoming in a bulk sufficient to establish a separate standard of its own, and, even when this stage is reached, that standard must be maintained. The causes which determine the standard require to be examined and understood and, further, steps require to be taken to see that the various units of production aim at the same standard. The nature of the first problem, the ascertainment of the causes which lead to any particular standard, may be briefly indicated. Frequently this is traceable to the variety of the plant cultivated; a source of variation too obvious and well understood to need special illustration. Or it may be due to the influence of climate or soil, to the one or other of which influences the differences observed are not always readily traceable, witness the varying hardness of the grain of the same variety of wheat when grown under different conditions. Again, it may be due to differences in the method of preparation

of the raw product for the market, as is the case, for instance, with sugar and rubber. Many of these problems are agricultural in nature, and they require for their solution definite agricultural investigation. But they require more than this; they require organisation. Successful grading, for instance, in a seasonal crop like cotton, not only involves the identification of the type of plant most suited to the local conditions, but also the organisation of a supply of pure seed of that type and its distribution among all the growers of cotton, so that the produce of all the units of production may be sufficiently uniform to permit bulking under one or other of the recognised grades. For such work, both of investigation and organisation, an agency is required which must possess the technical knowledge necessary to attack the problems presented with reasonable prospect of success. Economic development, however, requires more than this. If the maximum return at a minimum cost is to be obtained, methods of cultivation, rotation, application of irrigation water, manuring, soil studies and numerous other investigations have to be undertaken and, in addition, problems connected with disease, a fruitful source of restricted out-turn, are constantly arising for solution. The whole series of problems are fundamentally similar, and may be termed scientific; they require a scientific agency for their study and solution. From the very nature of the problems involved they lie beyond the means of any individual unit, and such an agency must be centralised.

A second subsidiary requirement has only recently received the prominence to which it is entitled. To any one who has lived in the wilder parts of the globe and among the less advanced communities, the loss that arises owing, on the one hand, to high mortality from pestilence and disease and, on the other, to inefficient work, the result of disease, will be well known. Recent medical research has thrown much light on many of the causes of these diseases. Broadly speaking, they may be grouped as epidemic diseases, such as cholera and plague, capable of decimating, and more than decimating, the population in a very short space of time;

and endemic diseases, sometimes, as in sleeping sickness and the more serious forms of malaria, leading to a high mortality, but, more often, as with ankylostomiasis, Bilharzia and the lower forms of malaria, leading to a reduced vitality which may seriously affect the efficiency of the population. The control of such diseases by methods of hygiene and sanitation is becoming more and more a recognised essential to development, and again the field is divided into two portions. On the one hand lies research, the determination of the causes and the methods of the spread of the disease; in parasitic diseases, as so many of these are, the carrier of the parasite and the life-history of both. On the other hand lies organisation, the effective introduction of those remedial measures which that research work has indicated to be palliative. A wide field of work is here laid open, extending from simple domestic sanitation to the large engineering anti-malarial campaigns of which those conducted in Panama, Palestine, and, more recently, Bengal are examples. High scientific attainment and effective organisation are essential, and such only a centralised agency can provide.

The last requirement, education, is now reached. This highly controversial subject cannot be discussed in detail here; for the present purpose it is merely necessary to indicate why there is a need for education and, in doing so, it is possible to ignore the moral grounds which are frequently, and with justice, placed in the forefront. Economic advancement, apart from any moral question, demands educational advancement of the community. If the happiness of the individual, a capacity to live a full life, be accepted as the object of civilisation, it is not possible to ignore the material side of that happiness. This implies that an adjustment must exist between the desires, which are the expression of that full life, and the means of satisfying those desires. It is actually a case of adjustment, for unhappiness as readily arises when the means of satisfaction are excessive as when they are deficient, a point which is all too frequently overlooked. The need for such adjustment has received wide recognition in America when, after the Civil War, the future of the

liberated slave population was an urgent problem. It was the guiding principle of Armstrong and the founders of the Hampton Institute; it is the guiding principle of the Rockefeller Foundation's educational policy, and it is a recognised principle of the American and Roman Catholic missions.

Essentially trade is an interchange of goods and, to the communities of the temperate countries in which the demand for tropical produce exists, the need for markets for their manufactures is only secondary to the need for the produce itself. In a primitive community, however, the necessities, or even desires, which can only be met with from without are few. A desire for a higher standard of life, involving an increased demand for goods, only arises from the wider intellectual development and broader outlook which education gives. That is the purely material justification for education; without it, trade cannot be reciprocal nor can it develop, for it is the urge to meet what are felt to be wants that provides the stimulus to produce. Further, education alone will supply the realisation by the community of the advantages of the higher standard of agriculture and of hygiene and sanitation which the respective agencies will attempt to foster. Without appreciation by the people of the object of such measures the labour of those agencies forms a thankless task, and there can be no secure improvement in the standard of life, health or production of the community.

CHAPTER IV

THE AGENCIES OF DEVELOPMENT

THE provision of the requirements which have now been outlined must be organised if orderly progress is to take place, and the nature of the organisation, by means of which these requirements are to be supplied, has to be investigated. In its essentials, this investigation forms a study of the different agencies that are normally found engaged in the practical work of meeting these requirements and of the relations which exist between those agencies. In this connection certain facts stand out clear and well defined; at least three agencies are involved, Government, the producer or cultivator, and the trader. The pages which follow will be devoted to considering how far, and how effectively, these three agencies can cover the entire field which has been indicated.

The first group of requirements, the provision of security by force against force, internal or external, the provision of security in possession by legal means and the provision of the administrative services which supply the data for legal civil decisions, are clearly the function of Government acting through the different services. As clearly, funds are required for the maintenance of those services, and these funds have to be realised from the community by a system of taxation, the administration of which in itself forms a separate function of Governmental activity. The incidence of taxation in, and the manner in which it is apportioned among the different members of the community, form together a problem which strikes at the root of the enquiry; but is a problem of which the consideration must be deferred for a few minutes.

With equal certainty the actual work of production is the function of the individual producer or cultivator; it is due to his labour that the crop is brought to fruition. For the present purpose it is immaterial whether he cultivates his own land and his labour is exerted directly in the interests of his family,

or whether he be a hired labourer working on land which is not his for an employer, the unit in this case being larger than the family. Whichever he be, he, with his associates, constitutes the human agent of production, and is the second of the three agencies referred to.

The essential function of the third agent, that of handling the produce and shipping it abroad as well as that of importing goods in exchange for that produce, is equally clearly defined and distinct. But while the activities of these three agencies are so far clear and distinct, they by no means cover the whole field or meet the entire requirements for development. This, then, is the problem; can all the requirements, both primary and secondary, be met by, and distributed among, these three agencies, or are one or more additional agencies required?

Let us look at the question from the aspect of the capital required. The cultivator is a man of very limited means, his implements, seed and cattle are all that he can supply, and frequently he is unable to maintain these without recourse to borrowing. Far from being a supplier, he is a consumer of capital. The trader frequently has large supplies of capital behind him but it is capital that requires the prospect of an early and material reward if it is to be attracted. Instances are not wanting, as in the case of the later Chartered Companies, where private capital has been invested in opening up tropical countries under conditions which rendered the hope of any early return on the capital so invested so uncertain as to be practically negligible; but such cases are few, and can enter into no general scheme. Under this limitation, that a fairly immediate return on the capital invested can be anticipated, that capital will be forthcoming. For the largest works, such as roads and rail, and for those which cannot be expected to give a sufficiently direct return for them to be organised on a commercial basis, Government is the only possible agent. The income of Government is not a direct return on capital investment; though it is, to a certain extent, dependent on the general prosperity of the country, and therefore subject to an upper limit, it can, subject to that limit, be varied to meet the progressive requirements of the country and can, further, be

pledged in guarantee of a capital loan raised for specific purposes. While, therefore, from the aspect of capital, it is possible to extend the activities of two of the three agencies beyond the limits of the spheres originally assigned to them, the discussion of capital has brought to light another requisite, namely the supply of capital to the cultivator, a subject which will be dealt with in greater detail later.

From such considerations as these it is not difficult to see that roads, which earn no direct income, large irrigation schemes, research, whether medical or agricultural, and education, are unquestionably the function of Government. Railways are likewise the ultimate responsibility of Government; but, in as much as they are usually run on a system which gives a direct revenue and a return on the capital invested in their construction, it is possible for the Government to contract out for their construction, maintenance and running, while retaining sufficient control, under a system of license, to protect the interest of the community. To a certain extent large irrigation schemes fall in the same category; but in this case the service is not so clearly defined, and the collection of revenue more complex.

In like manner the sphere of the trader may be extended to include the operation of grading, in which case he must be prepared to purchase small individual lots scattered over wide areas, to bulk these into larger and graded units, and to arrange for their collection and remission to the port of shipment. Theoretically this is possible, and actual instances of such organisations could be quoted, but it means a highly developed organisation; it means not only a large staff well acquainted with the local conditions, the language and habits of the populace, but it means a staff sufficiently skilled to value the quality of the produce offered for purchase, and it means a considerable financial organisation. The matter becomes more complicated when the produce as it leaves the field has to pass through an intermediate process or processes before it is reduced to marketable form, processes which may require expensive machinery for their conduct. Sugar may again be taken as an example, though the same principle

applies to rubber, tea, tobacco and many other forms of tropical produce. Sugar leaves the field in the form of cane, a perishable article from which the juice has to be expressed, and from the juice the extraction of the sugar is effected by a complicated series of processes. The machinery employed in the work of crushing the cane and the subsequent extraction of the sugar from the juice is complex, and the economic efficiency of the process is in large measure a function of the size of the plant. The modern sugar factory thus involves a large amount of capital and a business organisation too complex to form merely a branch of a general trading business. Moreover that capital will be expended in erecting an immobile factory for which a supply of canes guaranteed over a long period of time will be necessary. Ordinary business precaution, therefore, demands security on this point, and it is a security which can only be obtained by a hold over the cultivator or the land capable of producing cane. There is thus, developed an impetus towards the establishment of a fourth agency, the capitalistic farmer, having over the land itself a control sufficiently direct to ensure the supplies required to employ his machinery effectively and economically.

In the example quoted there is a valid and very practical reason for the existence of a fourth agent, but the tendency for such a fourth agent to arise is found where no such valid and obvious reason exists. The position of such an agent approximates to that of a landlord working, as the local conditions dictate, on an estate basis either by means of paid labour or through a system of tenantry. The organisation is one with which the European nations are familiar and, as such, it is the system which those who have left their native country to take part in tropical agricultural development have invariably sought to establish. Uncontrolled possession of the land is the natural desideratum which upbringing and inherited tradition impose in all such cases. Nor is this tendency limited to colonists from the home countries. The desire to possess land is innate in the inhabitants of almost all lands and in all races, though it is only in a sedentary community, where the pressure of population has begun to

manifest itself, that the desire takes a definitely individualistic direction. Among the nomad pastoral tribes possession is tribal rather than individual, while among the less highly developed tribes which have adopted a sedentary life the head of the tribe allocates to members of the tribe sufficient land to meet the requirements of the individual and his family. The ownership of the land in these cases remains tribal, but among some African tribes that ownership is limited by the recognition of partial individual ownership; the land allocated to an individual by the chief is recognised by tribal custom to be inalienable, while at the same time it is not transferable. If quitted by the individual, the land passes to the tribe, and is at the disposal of the chief.

The matter may be looked at from another aspect. It has been seen that among the requisites for development there are certain which can only be undertaken by an impersonal agent, representing the interests of the community, and usually known as Government. These are characterised by the need for impartiality in their administration and by the fact that, though expensive to fulfil, they give no direct financial return on the expenditure involved. Money has to be found to meet that expenditure and where is that money to come from? Moreover, it is an expanding expenditure, for as a country becomes more settled and developed, and as the population become more accustomed to settling their difficulties by peaceful means, the function of Government becomes more and more onerous. Concurrent with the expanding expenditure there must be an expanding revenue which must be raised in the country; and the principles on which the sources of that revenue are determined, and the methods by which it is collected, derive their importance from the fact that the economic basis of development is largely determined by them. Methods of collecting revenue are usually classified as direct or indirect, prominent among the latter being customs and excise, both of which are likely to be expanding. Customs tariffs, however, in a country dependent for its manufactured goods on foreign production, have the effect of checking development, in as much as they enhance

the price of these imported goods they tend to stimulate local manufacture; but in a tract such as has been presupposed, industrial development lies in the future. For this reason, as well as for the reason that, owing to the unequal demand for imported goods, the tax would fall inequitably, custom tariffs cannot be relied on to form the main source of revenue. This has to be sought elsewhere.

Revenue, after all, if it is to be permanently realisable and not an encroachment on capital, must be a fraction of, and adjusted to, the annual amount of wealth produced, and in a country which owes its wealth to agriculture, requires to be based on agriculture. In former times, and even at the present time, in those tracts where a monetary standard has not yet come into general use, revenue is paid in kind. Even after a monetary system is established, payment in kind may persist, though its persistence endures longer as between landlord and tenant than between government and the agricultural community. But in a modern community, realisation of revenue in kind is out of the question, it must have a monetary foundation. Theoretically the most equitable form of direct tax for revenue purposes is the income tax, for it adjusts the payment to the capacity of the individual to pay. Its disadvantages lie in the difficulties which arise when it comes to assess the individual's income; difficulties which are aggravated in backward communities, and in countries in which the habits and customs of the people are not too clearly understood. In such cases direct methods of estimating the individual income are not possible and resort has to be made to indirect methods. The simplest and most equitable, although rough and ready, form of this tax among primitive peoples in whom the habit of accumulating wealth is not developed is the head tax; a similar tax is the hut tax. The former is based on the assumption that all individuals are of equal status, an assumption which will not be very wide of the truth in the particular circumstances to which the tax is applied, and in any case the only possible assumption when the material for discriminating between individuals is wanting; the latter is based on the assumption that the dwelling place is a rough measure of status. In a

community in which the possession of cattle form the outward and visible sign of status, a tax based on the head of cattle owned gives an adjustment of that tax more obviously in near accord with the capacity of the individual to pay. Where, however, wealth is derived directly from the land by the cultivation of crops, the estimation is not so simple. A rough estimate is obtainable in this case from the area under cultivation.

In an agricultural community which has passed beyond the primitive conditions of life and arrived at a stage of development to which the head and hut tax do not adequately apply, but which has not yet reached the stage where a direct estimate of individual incomes is possible, direct taxation must be measured by and adjusted to the area cultivated. But any assessment on this basis is not easy. Where the population is light there will be less difficulty; land will be in abundance, and as only the best and most fertile soils will be brought under cultivation, it will not be seriously erroneous to assume that all cultivated land is of equal value. Later, with development, such an assumption is not justified, and area no longer becomes an adequate guide. Again, very different facilities are available for the marketing of produce, and hence the value of produce as yielding income is not identical in all areas. A true adjustment must take account of such factors. Again, seasons differ, and the return of one year may be but a fraction of the return obtained in another. The tax must, therefore, if it is to be equitable, be capable of ready adjustment, even from season to season. For its assessment accurate records will be required, by survey of ownership, using the word in a very general sense, a record which may be termed a record of rights; and there will be required a record of soil conditions, and other important features such as water facilities. The annual adjustment of such a tax, in the manner and sense in which an income tax is adjusted annually, is clearly out of the question. It is only possible to work to averages with frequent revision, and with liberal remission, in the event of seasonal failure. Alternatively the existence of a fourth agent, acting as intermediary between Government and the individual cultivator, and having sufficient

financial stability to absorb the shock of bad seasons, will do much to reduce the need for remissions and to simplify the organisation of assessment and collection. In the early stages revision must be frequent, for, with the country rapidly opening up, changes of value will be of constant occurrence; later, however, revision will be required at less frequent intervals, until a constant period for the currency of a particular assessment can be fixed. It should, however, be noted that a constant period is only equitable under conditions of constant or gradually changing prices; where rapid changes of price occur, as in the war and post-war period, a lack of adjustment arises which results to the detriment of the communal interests, if the change is a rise in prices, and to the detriment of the individual, if the change is a fall.

The tax here described is fundamentally an income tax based, however, owing to the practical difficulties in the way of any direct method of assessing income, on the outward and visible signs of individual wealth. Clearly it is not a true measure of income, for possession of cultivable land is not, in itself, a guarantee that land will be cultivated, and the tax levied on the basis of land owned is less a tax on income than a tax on potential income. As such it has this advantage, that it acts as a direct stimulus to production. As is the case with the head tax, hut tax and cattle tax, all of which are assessed and demanded in money, the tax acts as a stimulus to excess production over and above the local requirements, and this has an educational advantage with the individual over and above the more general advantage with the community of a stimulated trade. Clearly also, though fundamentally an income tax aiming at taxing the individual income, it is in practice a land tax, and its method of periodical revision and general features bears a close similarity to the land revenue system of India which has been described above.

But in spite of the similarity which exists, there is a fundamental difference between this tax and the income tax which requires to be emphasised. The tax may be considered from another aspect. Among the local community, before the forces of the external world come into play, land has no realisable

value. It is present in sufficient abundance to meet all the needs of the population, and can be secured merely for the labour of clearing, with or without the sanction of the tribal chief. Although, it is true, possession is frequently a deeply cherished and strongly guarded right, it is an inalienable right which if quitted by the individual reverts to the tribe. With the establishment of a demand for produce a pressure to extend cultivation is exerted from without, an extension which may be effected directly by an external agent or indirectly through the local population. The result of this external demand for produce, therefore, is to give a value to the land which it formerly did not possess, and which will appreciate with time until the economic limit is reached. At the same time the price realised for the produce is, from the start, determined by its value in the world's markets, and there is consequently a margin between that world's market price and what may be called the cost of production. That margin will be increased on the one hand by improved means of transportation, which lessen the cost incidental to bringing the produce to, and placing it on the market, while on the other hand it will be diminished by the amount by which land itself appreciates owing to the increased demand. As long as competition for the produce remains in abeyance cultivation will remain in the hands of persons who are ignorant of the true value of their produce, and the price received by them will be determined by the cost of production, under which term must be included the profit necessary to stimulate production. Under these conditions the margin between the two values will accrue to the trader. But with the development of competition for the produce a greater or smaller portion of that margin will accrue to the producer. These are the conditions which stimulate a demand for land which now becomes a coveted possession, and the possession of land begins to confer a status on the possessor. The sum of these forces results in a tendency towards the substitution of the estate for the individual holding as the economic unit of cultivation. This evolution leads to one or two alternatives, either a considerable section of the population becomes dispossessed, but continues to work on the land as a landless

labouring class, or the land is leased out in lots suitable for individual cultivation by a tenantry paying a rent. This rent, whether paid in kind or money, has to be met from the proceeds of the sale of produce, and will be included in the cost of production. It is met from the margin which has been seen to exist between the two values of the produce. It is realised not by the cultivator, nor by the trader, nor by the community, but by a fourth party who will be recognised as a landlord. It originates not as the result of the labour of agricultural production, but is in the nature of interest on capital which has passed from the passive and potential to the active and material condition. Where land has become a recognised transferable asset, the rent received by the owner can be converted, as can other forms of interest, into capital by sale of the property which pays the rent.

The return represented by the marginal difference in value of produce accrues to the trader or to the cultivator, while that portion of this value which appears as the return on the capital appreciation of the land accrues to the owner of the land whether he be the cultivator himself or merely the receiver of rents. Land, however, is a communal asset and, in equity, the community should receive an equitable share of that appreciation which owes its existence in large measure to communal activity. In India, the land tax assures to the community that due share. In as far as cognisance is taken, during assessment, of the value realised by the cultivator for his produce, the tax, where it is realised direct from the cultivator himself, embodies the incremental value of the land; for the value of that produce, to the extent to which this is determined by cost of production, embodies the interest on the realisable capital value of the land itself while, in "zamindari" tracts, where it is based on rental values, the tax becomes even more directly proportional to the incremental value of the land. The tax is thus no longer an income tax pure and simple; it is, in part, a tax on capital values which, however, is realised not as a direct capital payment, but in the form of an annual appropriation of a part of the revenue, or interest, derived from that capital. The community, in fact comes to occupy the position of a part

proprietor of the land, sharing in the profits but, unlike the other partners to proprietorship, unable to realise the capital which that interest represents. This is an equitable position, and the tax is a legitimate tax, for that incremental value materialises largely as the result of communal action. Whether it is legitimate to extend the tax, as is the case in India, to that capital appreciation, which is the result of the individual initiative of the owner, is a different question which is beyond the scope of the present discussion. If it is so extended, a reasonable time should be allowed to elapse after introduction of the improvement, to which the appreciation is due in order that the owner may have a sufficient expectation of a return for his energy and initiative to stimulate that energy and initiative.

The incremental values which materialise in capital appreciation originate from the fact that land in the initial stage has a potential value only. There is a definite limit to that appreciation, and this will be reached when the entire marginal value has been absorbed. Before that limit is reached a period occurs during which that capital appreciation will accrue to the possessor of the soil unless active steps are taken to secure a reasonable portion to the community. Where, as in England, no such steps have been taken, and the marginal value has been absorbed by private interests, the community is not in a position to recover its share without some form of sequestration. In India, where the right of the community to a share in the land has long been recognised, the incremental value has materialised gradually, by the gradual extension of markets until, only recently, have the world's markets become the controlling factor in local prices; for in India, the system has run concurrently with the gradual expansion of transport facilities. In the communities now under consideration the adjustment is likely to be much more rapid, and the period of adjustment consequently much reduced. From this fact two consequences result: the rate of appreciation in the value of produce in the local markets will be more rapid than the increasing capacity of the individual, assuming he reaps the whole benefit, to devote his unaccustomed wealth to reproductive developments, and a

large part will, almost inevitably, be dissipated. Again, the period of transition coincides with the period of greatest demand for capital for those works which can only be carried out by an impersonal agency acting on behalf of the community as a whole. The institution of the tax, not as an income tax pure and simple, but on a basis which takes into account the capital appreciation of the land, appears to be not only equitable, but economically sound. It assures to Government, as representing the community, a revenue which will enable the more important requirements, which have been briefly summarised earlier, to be undertaken.

So far the theoretical aspect only has been dealt with; the source from which that revenue which is required, if important constructive works are to be undertaken, is to come. And it has been found in a tax which is in part an income tax, but also, in part, a tax on the incremental value of land. How far is it possible to assess such tax, and how far is it realisable? That it is possible to effect both objects the example of India unquestionably shows. It is possible to build up an administrative record which will contain all the details requisite for such an assessment, but it is necessary, as a preliminary, to organise a survey to which the record will refer. It is an ideal, perhaps, but a practical ideal, the cost of administering which will not, in the long run, be out of proportion to the revenue realisable from the assessment. That such a system of assessment perfect in every detail cannot be called into being with one stroke of the pen has to be realised. Nor is it necessary. The records preliminary to an assessment can be made by districts, and the system thus gradually introduced while revision can be made in the first instance at relatively brief intervals until the perfection aimed at is gradually attained. In the meantime two considerations must be kept in view. Until the accumulation of records is sufficiently advanced to admit of the practical introduction of this method of fixing the demand, and to meet the need for revenue until such time arrives, the principle of the tax must be upheld both to ensure that capital appreciation does not pass entirely to private ownership and to familiarise the individual with the idea of the tax; and, whatever the

method adopted with a view to achieve this object, it should be considered merely as an approximation to the method to be introduced subsequently, and reviewed from this aspect, to ensure that it contains nothing antagonistic to that general principle. The simplest form of taxes, the head, the hut and the cattle tax, are concordant with this principle, and form a useful means of familiarising primitive communities with the principle from the earliest moment. A further stage, not discordant with the principle, is reached when the village is treated as a communal unit and assessed either on its population, its wealth in cattle or its area, under cultivation, and when the head man is left to apportion the individual incidence.

But at this stage an additional factor is introduced which may lead to unexpected developments unless the implications are recognised from the first. What is the exact position of the head-man of the village in these circumstances? Apparently he is the lowest term in the scale of the organisation which forms the machinery of revenue collecting. But Indian experience has shown how readily the transfer from the status of tax collector to landowner comes about; there is, in fact, under certain favourable conditions, a narrow bridge between the two. The head-man has not only to be paid for the labour of collecting, he has responsibilities assigned to him which give him a status in the village; and this, rather than the financial reward, is what appeals to him and leads to this approximation.

The stage in the evolution of the land tax which has just been discussed forms a turning point from which an advance can be made in one of two directions. The village is the lowest unit of assessment, the sub-division of that assessment into smaller units to correspond with the units of cultivation being left to the head of the village. The assessment, with all the records necessary thereto, must now proceed to take cognisance of the different units separately, throwing a large additional responsibility on the revenue organisation, and, incidentally, reducing the status of the head-man to that of the lowest officials of that organisation; or it must be restricted in its application, thereby conferring on the head-man an added status under which his position will approximate more closely

to that of a landowner. Solely from the aspect of revenue administration, the latter course would appear to be indicated. The economic aspect may be left for the present for consideration subsequently, it is sufficient to indicate here that the relinquishment of all official control over the regulation of payments by the individual cultivator to the head-man implies that these payments will now be regulated by economic considerations only. The position of the head man under these conditions becomes hardly distinguishable from that of the landowner; and a fourth interest in the land is thus established. It only remains to be said that the term village head-man has been used throughout the above discussion for simplicity of expression; in some cases it may be advantageous to take a larger unit than the village when a chief or a sub-chief will occupy the position here assigned to the village head-man.

Earlier in the course of this discussion attention was drawn to the need of the individual cultivator, when working as an independent unit, for a supply of capital. Agricultural indebtedness is a feature common to all countries and systems. It will as certainly occur in the tropics as elsewhere, and will as certainly be a drag on development. Adequate provision to meet this need for capital is, therefore, an essential. Capital is always available for any sound scheme, but it is shy and, if it is to be attracted, a reasonable probability of an adequate return must be demonstrable and a reasonable security offered. Herein lies the difficulty inherent in all schemes for supplying the capital required by the small cultivator. He individually has little or no security to offer, or what security he has is in a form which is not readily realisable. There are four main methods by which the cultivator may be placed in possession of the capital he requires, and they depend on the degree to which adequate security is provided.

The first of these is the direct supply by Government. The part Government can play in this matter, however, is strictly limited. The security offered may be the land itself, and Government no more than any other agent having no special local interests could afford to risk becoming owner of a group of isolated small areas of agricultural property. Its action is

limited to the granting of advances for specific developmental work such as well construction and, even in these circumstances that action is limited to the cases of the more substantial members of the agricultural community. Any action on the part of Government in this direction does not, and cannot, touch the main problem of agricultural indebtedness.

The second method is rendered possible by the presence in most villages of a petty trader, the last link in the chain of distributing agents of goods which are not produced locally and have to be imported. He is also very frequently the first link in the chain of collecting agents for the aggregation of the excess produce of the country. As such, he has an intimate knowledge of all the individuals who go to form the village community, and he knows which of them are reliable and which untrustworthy. He is in a position, therefore, to make advances to meet the individual needs. Generally he adds money-lending to his business, advancing money and even seed against the harvest. His security is slight, being composed more of personal knowledge than of material assets; his risks are great, and consequently his rate of interest high. In India, where the system is general, a common form, for instance, is in the case of wheat, an advance of seed at sowing time on a "sawai" basis; that is, for each unit of wheat advanced at sowing time $1\frac{1}{4}$ units are recovered at harvest. The crop period being six months, this means interest at the rate of 50 per cent. per annum paid in kind while, not infrequently, $1\frac{1}{2}$ units, or 100 per cent. per annum, are demanded. This is not necessarily the true interest when expressed in terms of money, since the price of wheat at harvest is, under normal conditions, below the price at sowing time. More generally, however, advances are made in cash or in seed against the crop, the cultivator, in the latter case, being bound to dispose of his produce through his creditor. This system is much in favour of the creditor, who has it in his power to determine the rate paid for the produce, and frequently fixes that rate well below the open market rate. The village trader and money-lender thus serves a useful purpose in the village organisation, but his is a position which is capable of abuse. He alone has that

intimate local knowledge which enables him to assume the latter rôle; competition is lacking, and he would hardly be human if he did not take advantage of this fact.

In comparatively recent years a third system for providing capital to the cultivator has been built up in the co-operative organisation. This system is based on the fact that while the security an individual cultivator may have to offer may be worthless, the combined security of a group of cultivators is of value. The unit of this system is the co-operative credit society, and it is organised on the basis of unlimited liability of members for the total debt incurred by the society. By linking up these societies into groups, usually on a territorial basis, a complete organisation has been evolved which, when the system is fully developed, places the individual in touch with the money market of the country. The system, as fully organised, has done much to provide capital at a reasonable rate of interest and not the least of the benefits conferred is that it provides a source of capital with which the money-lender will now be in competition; but it has its limits. It is claimed for the system that it has educational value; but educational advancement and business efficiency are rarely to be found associated together in this manner. In a system of direct economic value, efficiency must occupy the first place, and it is fortunate that there are, in most communities, men of a philanthropic turn of mind willing and able to guide the movement. Those primary societies are run most efficiently which entrust the management of their affairs to such an one to the practical elimination of the educational aspect. Great as is the potential value of the co-operative movement, and large as are, in many cases, the sums handed by it, sound development along these lines among backward races can only be achieved by a gradual process. It cannot offer a complete solution of the problem of agricultural indebtedness.

There remains the fourth method which is only applicable under those conditions in which there is present a fourth agent functioning in the rôle of landlord. He, too, has, or should have, an intimate knowledge of his tenantry. Relatively speaking, he is a capitalist; and if he takes, as he should take,

a personal interest in his property, he is in a position to employ his capital in development. If, as is so frequently the case when, in tropical countries, estates take the place of small holdings, he works through a system of tenantry, he can stand towards that tenantry in the position of the village money-lender. And he has this advantage, if he will only recognise it, that his interests and those of his tenants are, in the long run, similar if not identical. The position, in fact, is that found under the metayer system of the continent. It is perfectly true that this source of capital is rarely drawn on, and the reason is largely historical. In early times, before security in its present sense was established, and before transport facilities provided a market for excess produce, the incentive to secure that excess was wanting. Such pressure as did exist was exerted by a more or less distant authority which took what it could get and gave nothing in return. Co-operation and incentive were both lacking. At the same time pressure of population was hardly a potent force, the ties which bound the tenant to his overlord were not ties of mutual profit in trade but of mutual protection. With an increasing population the overlord gradually found himself in a position to demand rent owing to the competition which arises for possession of the more fertile land while, concurrently, with the increased security offered by the more settled conditions, the tendency arose to replace personal service by payment in cash or produce. There is here no opening for profit from the disposal of excess produce beyond that offered in supplying the populations of the small urban communities situated in the neighbourhood; this comes later with the opening up of the country. By this time, however, the overlord has become confirmed in his habit of looking to his rents for the main source of income; he frequently becomes an absentee, rents are forced up to their maximum, and profits are diverted to the money-lender, to whom the cultivator is forced to turn for the disposal of his produce and for help when in difficulty.

These are not, however, modern conditions. The pressure exerted to-day is not commonly a pressure of population, but of the world's demand for markets. There is every incentive,

therefore, to the man who finds himself in possession of more land than he can himself cultivate, and who is in a position to attract tenants, to take his place in the organisation and to use his capital in assisting production and in handling the produce. The co-operative movement is an organisation on a horizontal plane; the organisation here indicated is built up vertically.

Thus, again, arises the need for contemplating a fourth agent as a means of completing the organisation for development. Nor is it possible here to define any limit to the field of application of this means. Where a landlord class is in being the limit appears to be imposed by educational defects which are removable. It only requires an abrupt disturbance of the equilibrium in the economic conditions such as was produced by the war to call forth an indication of the potential force lying behind such a movement. Under the war conditions prices in India rose during a series of years in a way that left rents lagging in the distance. From this the cultivating tenant benefited, which was to the good, but, even better, the prospect of profitable dealings led many landlords to resume a personal interest in their property, to invest capital in improvements, and to handle the produce for themselves.

CHAPTER V

THE TRIPLE PARTNERSHIP IN PRACTICE

IN the course of the development of the argument more than one line of thought has led, as if inevitably, to the consideration of the possibility of a fourth agent as a desirable asset from the economic point of view. The position of such an agent must now be developed in greater detail. And here arises a difficulty in that there exists no word in the English language which can be adopted for that agent without danger of misapprehension. Landlord, a word used more than once in the course of the earlier chapters, is, perhaps, the nearest approximation to the position envisaged for this fourth agent; but the position contemplated is not comparable in all respects with that of a landlord in the English sense. In India there is no such difficulty, for a word—*zamindar*—exists, and the meaning of that word was dealt with when describing the Indian system. It is necessary, however, to have a term and, with this caution, the word “landlord” may be adopted.

Of these four agencies it will only be necessary to consider three, the Government or Crown, as representing the community, the landlord, and the cultivator, as being concerned with the question of land tenure; the fourth agent, the trader, carries out his functions with no direct dependence on the land. Clearly the goal that is being reached, though by another route, is the “normal” system described earlier (Chapter I). It is the system that has been referred to by Morison* as the economic system. It recognises the exceptional position held by land and the right of the community to a share in the wealth drawn from it; it seeks its justification in part as being, from the purely economic point of view, the system that will, if

* Sir T. Morison, *The Industrial Organisation of an Indian Village*.

not immediately, at least later, secure the largest return from the land and, in part, as being the system which permits the free development of the indigenous population in the spirit of the Covenant of the League, for it is a system of true co-partnership. The question that requires an answer is, in what proportion is the wealth secured from the land to be shared between the three parties if a just division is to be effected and subsequently maintained? It will be obvious that the position of the weakest partner, the cultivator, and his capacity for improving his position as his moral and intellectual standard is uplifted, will depend in large measure on the answer given to this question; and it is this moral and intellectual uplift which is the key-note sounded by the Covenant. With an equitable division of the reward there is provided the opportunity for advancement within the agricultural organisation to such of the agricultural community, as, by thrift and intelligence, are capable of seizing the occasion; and it is an advancement in a sphere of activity to which the members of that community are accustomed. This is a feature which is not present in the same degree in any alternative system. Under a system of small holdings, to the more intellectual of the community the openings which offer within the agricultural organisation are limited; the inevitable tendency, which a literary system of education fosters, is for these members to seek their future in the "liberal" professions such as the legal, the clerical, and especially in the Government clerical ranks.

But while the triple partnership in the land appears to be that which will lead, in the long run, to the general benefit and progress of the community and individual, it must not be supposed that it has not its dangers. The spirit of competition and rivalry, whether between individual or between class, is innate in human beings and, where economic conditions favour it, will show itself in efforts of one or other of the parties whose interests are personal, to secure for himself the major portion of the return. The rivalry of the third party, the Government, only shows itself under a despotic system, and it has been seen how Akbar aimed at securing all the produce except that amount which would be sufficient

to support the cultivator, his family and cattle and to provide seed for sowing. The form such competition takes is well shown in the Indian experience already described. Fundamentally it is the reaction between supply and demand; the main disturbing factor to the balance between these two having been, in the past, the increase of population. As long as population exerts little or no pressure on the land, the two parties are bargaining on terms of equality; and it is only when this pressure begins to exert itself that the scale becomes weighted against the cultivator and in favour of the landlord. This tendency can, in part, be overcome by education, by instilling into both parties the co-partnership and co-operative idea. In all classes there are good and bad individuals, and a good landlord, recognising the benefit to be derived by unstinted co-operation, and acting on that recognition, will attract to himself the good tenant to their mutual benefit. Educational effort to this especial end has never been fully tried, but, though it may be expected to do much, it is not probable that it will be self-sufficient in overcoming innate human tendencies. The third, impersonal party Government therefore, will have to assume the additional rôle of arbitrator between the two personal parties. That rôle is played by the adoption of some form of rent policy which, from the dynamic nature of the conditions, of necessity requires revision from time to time to meet the changes that take place in those conditions. This has been demonstrated above in the description of the rent policy of the United Provinces of Agra and Oudh. With changes in the demand for land produced by increased competition, here the result of increased population, the balance between supply and demand is upset; the function of Government is to foresee these changes, which take place slowly, and adopt in advance measures which are in accord with its accepted policy. It has to be admitted that only too frequently in the past the interpretation of policy in practice has lagged behind, and the new situation met when the changed conditions have produced an economic upheaval. The danger then is that the new situation will be treated as a static one, and the new regulations, though they may be

well designed to meet it as such, will be found to be discordant with the policy which recognises the dynamic nature of the problem.

Before, however, this question of partnership and the shares of the respective partners can be discussed adequately, a brief digression must be made in order to consider the position with regard to the ownership of land a little more in detail. In all the cases under consideration the question resolves itself into that of the rights of an alien authority which gains control or possession of a country by treaty, conquest or other means. In the earlier period of the world's history the conqueror was sole arbiter in this matter, and his will was paramount. Under it the act of conquest vested the right to be considered sole possessor of the soil in the conqueror. The Normans, when they conquered England, adopted this view and distributed the land among themselves and their adherents; the rights of the conquered in this matter were simply not recognised. The same is true of the conquests which followed the discovery of the new world; full possession of the land was taken by the conquerors; and in the absence of an amenable population willing to serve, such population was exterminated or absorbed. India and China alone form an exception to this rule owing, without doubt, to the magnitude of the undertaking in these countries. Modern penetration, however, follows a very different policy and one which, though adopted earlier than the war, finds its first clear expression in the Covenant of the League. This new policy of necessity implies the maintenance of native rights and customs, not the least important of which is the right to the possession of land as recognised by local custom. Custom, however, differs from place to place and from tribe to tribe. In some cases custom confers no rights in land which is not directly in occupation; in countries which have been subjected to Mahomedan control land has been, and is, definitely recognised as belonging to the Mahomedan conqueror. In these cases the first step is to register all ascertainable rights to ownership, and, when this step has been accomplished the remainder of the land for which no claims

to ownership are substantiated passes to the direct control of the alien Government, to be held in trust for the community. In other areas, notably West Africa, and especially Nigeria, local custom recognises no direct unqualified individual rights in the land. Such individual rights as do exist are qualified and are derived from the tribe. It is the tribe, as represented by the chief, that is the recognised owner, and there is little or no land which does not lie within the sphere of one or other tribe. The acceptance of local custom as a principle of administration in such cases means, therefore, that Government, representing the communal interest of a group of tribes, secures the direct control of no land. Usually where this is the case, individual rights, as granted by the chiefs, include free possession of the area actually occupied, and permanent occupancy, without, however, the right of transfer. If the holding be quitted, possession reverts to the tribe, and the land may be reallocated by the chief.

In the former case the establishment of a land tax in the full sense as described in the last chapter is a normal development in accord with local custom, but the argument does not apply in the latter case. Land is here recognised, within the limits laid down by custom, as a personal possession, and any direct tax on the land if applied to the individual would be contrary to that custom and would be resented. Difficulties, therefore, arise since the imposition of a tax in form other than an income tax calculated on the produce or on the capacity of the occupied land to realise produce, a very necessary safeguard against wilful limitation of effort, would be opposed to local custom. The same objection applies with equal force to the hut tax, which cannot under these conditions be imposed without violating local custom.* That a lack of accord exists between the land tax in its developed form and local custom in these cases is, no doubt, true and the objection to its imposition is a valid one, but it has to be remembered that tribal customs are not fixed and immutable. They, like most forms of human activity, have passed, and are passing, through

* The whole subject of the tax is discussed by Sir F. Lugard in *The Dual Mandate*.

an evolutionary process, and the tribal custom which is here under consideration is merely a stage in that evolutionary process. Where pressure of population on the land has given to that land an exchange value, as in the case of towns and their neighbourhood, custom itself alters and may recognise transferable individual rights in land. Pressure of population is, however, a slowly acting force and, under present conditions, is in agricultural tracts replaced by the pressure of a demand for produce. The difference is one of degree rather than of kind, and the administrative problem is the solution of the question of devising the best method of carrying tribal custom through the evolutionary changes with the least disturbance; the acceptance of what is, in reality, merely a step in the evolutionary ladder as the topmost rung is open to criticism. The dangers of full acceptance of this form of tribal custom become more apparent when the question of the future of forest areas is considered. These areas are communal assets of immense potential value, and assets which require long vision, skilled exploitation and much capital if that value is to be realised without destruction of the original asset. Their economic development is beyond the capacity either of the individual or the tribe. Experience everywhere has shown the danger of leaving forest areas in the control of purely local communities or individuals and tribal custom must be violated if these forests are to be preserved, not merely as communal but as world assets.

The idea of the triple partnership in land, therefore, may be accepted; it may be regarded for the moment as the ideal at which to aim, and an attempt may be made to follow the shaping of that ideal under the different local conditions, for clearly the local conditions will have an important bearing in deciding what is and what is not possible. And in the first place the effect of climate may be considered, starting with the simplest case of a rains belt where drought is unknown and where the indigenous population is, as may be the case, relatively dense. Organisation, in as far as it exists, is on the tribal basis, and land falls into tribal spheres. Cultivation is by small units based on the family, and production requires the

minimum of labour under the kindly climatic conditions. Where, in this organisation, is the third party, the landlord, to be found? In an earlier description it has been explained how a choice has to be made between two alternatives (p. 58). Either the status of the village head-man must be increased until his position approximates to that of a landlord, or it must be diminished, when he will become merely the lowest official of a revenue service. It was explained, further, that the term "head-man" was used merely in exemplification; that the unit need not necessarily be the village. Tribal organisation works up from the individual through the village head-man and sub-chiefs to the chief whose position may be almost regal. If the principles of the League are to be upheld, the position of the paramount chief is obviously that of a member of the first party, namely Government; he is, in fact, that first party, for the alien power is merely carrying out a trust for a people not yet able to stand alone, and the execution of that trust of necessity implies the maintenance of the tribal organisation in as far as it is compatible with modern conditions. The organisation, in fact, places the alien Government in the position of the flux which welds the different tribes into one organic whole. It is as if the British territories in India ceased to exist as such and the Government of India remained merely to carry out, on an extended scale, an administration on the lines now followed in the case of the Indian States. It is a position which, in the course of general progress, becomes more and more that of an adviser and less and less that of an administrator. It is from among the sub-chiefs of varying degrees of status ranging from the paramount chief who, in this conception, represents one of the interests in the land, through the village head-man to the cultivator, who represents the second interest, that the class that will form the third interest must be sought. That the members of this class are, or will be, all adequately equipped to play the rôle assigned to them is, perhaps, more than doubtful, and in any case, they will require instruction, guidance and experience before the system can be effectively organised. It is a question of time, and a period of slow construction is inevitable. But in the course of that development

changes will inevitably occur; with freedom to buy and sell land established between members of the tribe a downward movement of the less progressive members among the tribal aristocracy will take place, while an upward movement of the more progressive among the cultivating community will show itself. No hard and fast organisation on a class basis will result, but a ladder will be provided by which the more capable will ascend and the less capable descend.

Such a development as has here been outlined is capable of taking place without any economic or social upheaval; it is a gradual and evolutionary process which could take place almost unnoticed where the crops grow involve no large expenditure. It is more difficult when the crops grown involve a larger expenditure of capital, as is the case with sugar; when the return is delayed, as is the case with slowly maturing crops as rubber, tea or coconuts; or when the produce requires organisation for marketing, as is the case with bananas. In the first and last instances a highly specialised and expensive organisation, either to manufacture the marketable product (sugar), or to ensure regularity of supplies of a perishable article (bananas), is necessary, while in the second it is capital to tide the grower over the non-productive period that is required. In all these instances the requirements cannot be met by a landlord class which originates in the way described; not at least during the evolutionary period, and it is during this period that the pressure to produce such desiderata will arise. An agency outside the existing three is required, but it is security that will alone attract such an agency to come forward to provide that which is lacking, and in as much as the pressure comes from without, the practical development takes the form of an external agent seeking security, and seeking it in that form to which he is accustomed, namely, land. But in an already well populated country the security cannot take this form of a reversionary interest in the land; to admit land as a form of security would undermine the whole principle underlying the idea of trusteeship. That security has to be found in a system of spheres of influence under which he who invests the requisite capital secures an adequate assurance that he will, in due

course, handle the produce. Such an assurance inevitably restricts competition on which the cultivator relies to secure value for his produce, and some other means of regulating the price received by the cultivator has to be found for his protection. But the assurance which a sphere of influence gives may not be a sufficient and adequate guarantee. Regularity of supply is hardly less essential for economic business than adequate supplies. No sugar factory, for instance, can work efficiently unless the delivery of canes is organised to form a regular stream never largely exceeding, or largely falling short of, the mean rate of consumption. Similarly an intermittent steamship service for bananas implies the simultaneous delivery of freshly cut and mature bananas up to, but not exceeding, the capacity of each boat. The organisation of this regularity in the delivery of fresh and perishable produce from a number of small units is not easy. To guard against failure and the loss which would result from even a temporary breakdown in the supply it may be found necessary to strengthen the security by the grant of a lien on a limited area of land, to be held and cultivated directly; but the amount so held should be regulated by the requirements of the individual case, and the consideration which will enter into the decision are the needs for a readily accessible source from which any accidental delay in, or shortage of, the normal supply can be made good. Such areas have a further value which may be mentioned here, although that value is incidental; they act as demonstration areas, trial grounds and agencies for the supply of good stock.

Beyond this in the direction of freedom in the sale of land to aliens it is undesirable to go and for this further reason. The idea of an exchange value for land is generally a novel one to the members of a community still organised on a tribal basis; most certainly the true potential value of the land will not be appreciated by them, and bargaining will, therefore, lie between parties ignorant on the one hand, and a party cognisant on the other, of the intrinsic value of the property in question. These are not the conditions under which an equitable sale can be effected. Such sales must be restricted, and be subject to revision by the Government, the only impartial agent possessing

the knowledge required to adjudicate on the equity of the transaction. It is true such an alien person is competent, and actually becomes a landlord in the sense defined, but he is one whose main interests are the maximum return from the land with the minimum cost, and he can usually secure this by direct cultivation with paid labour. Until the cultivator is instructed in better methods, and this is a matter of time, his returns will fall short of, frequently very far short, of the returns obtained by direct cultivation. It is a passing phase, but the claims of the factory or exporter are immediate and insistent. The injury done is not that the second interest is not represented, but that the third interest, the cultivator, is reduced to a landless condition in which progress is impossible.

Passing from the well-watered areas to which these remarks more especially apply, with their vigorous vegetative growth and their relatively dense population, attention may be directed to those less favoured areas where a lower or precarious rainfall limits production, and where a less densely packed population is found. The characteristics of these areas are a lower return from a given area of land and the greater effort required to secure that return. Generally speaking, the simple methods and hand labour of the moister regions give place to implemental tillage by means of the plough and cattle; cattle, in fact, play a large part in the economy of such an area, and this imparts to the methods of cultivation certain characteristic features. Fodder has to be grown for the support of the cattle employed, or extensive areas are kept undeveloped to provide the necessary grazing grounds. It is in these areas that, in Africa, are found the pastoral nomadic tribes with no land under settled cultivation.

It is under these conditions that the pressure exerted by the external demand for produce leads to the most drastic, and at the same time most obvious economic changes. Population is inadequate to maintain effective production, a production in any way approximating to potential capacity, for it is limited by the local supplies during the most unfavourable season. With improved transport facilities, production can be increased on the one hand by the import of necessities

during bad seasons, on the other by the introduction of labour-saving devices. The former is a slow process, working through the natural increase of the population; moreover it demands for its realisation a spirit of thrift, building up reserves in favourable years to meet the needs of adverse seasons, a spirit which is not characteristic of primitive races, and which can only be inculcated gradually. For these reasons development from within cannot keep pace with the insistent demand, and the force of circumstances compels development on the latter lines. But the employment of labour-saving devices, mechanical tillage and so on, requires capital, requires large areas under one control, and requires a supply of labour serving for a wage. The trend of this development, therefore, is towards a landless labouring class serving for a wage in the interests of an alien employer. It is only under such conditions that security will be afforded to the capital which such a system of cultivation demands. Here the tendency is for the third party to become an alien proprietor, and this tendency is emphasised when, as in the higher altitudes within the tropics, the climatic conditions permit the permanent settlement of the white races. And this tendency is exhibited under these conditions, even when the motive of capitalistic farming is not present in an intense form; and for two reasons. A tropical sun, even at these high altitudes, is not conducive to manual field labour by the white man; secondly, the system of small holdings personally worked on a tenancy basis is foreign to the instincts and traditions of the members of those white races which are the chief to adventure and take up land in these parts. If, therefore, the tendency leads here to an alien landlord, it is tradition rather than economic necessity that leads to the system of farming which eliminates the second party, the cultivator, and reduces his status to that of a landless wage earner.

In these scantily populated tracts there is room, no doubt, for the alien immigrant; and such immigration is justifiable. But unlimited immigration and unrestricted appropriation of land by an alien element is equally without doubt incompatible with the responsibilities which the modern outlook, as expressed in the Covenant of the League, recognises. But responsibilities

are reciprocal; if civilisation recognises the claim of the community to protection, it also imposes a duty on the part of that community to play its part in production. In a world rapidly filling up, no community can claim the right to the undisputed possession of large areas of the surface of the globe to develop, or fail to develop, at its own pleasure. Immigration is justifiable as being the only method of securing within reasonable time the material wealth which the country is capable of producing, but it must be a controlled immigration if the responsibilities towards the indigenous population are to be met. That responsibility has usually been met by a system of segregation; areas in which the white settler is permitted to settle are demarcated from native reserves, and permission to purchase land in either of the two demarcated areas is strictly limited on racial grounds. Government here plays the rôle of disinterested adjudicator, and it is, perhaps, the most difficult rôle that any Government could be called upon to play. Who can say what reasonable limits should be placed upon the natural increase of the indigenous races of the community; and who can say that, in course of time, the raising up of a landless wage-earning class in one area while, concurrently, the building up of a landed class in the other will not lead to problems of still greater complexity as the educational and material standards advance? These are questions on which no one would care to dogmatise, but it would appear desirable to investigate more fully than has been done in the past the possibilities of developing under the alien landlord a system of tenancy. It is a system, it is true, which is opposed to the tradition of the dominant class, but it is one which lends itself more freely to the evolutionary processes which the future is bound to hold in store. But how far it can be adopted will be, to a considerable extent, determined by the crops grown. Maize and cotton are essentially crops adapted to a system of tenant farming; both are rapidly maturing crops bringing in a quick return, while the latter is especially adapted to the conditions where the seasonal demand for labour can be met from the family, a form of labour which need not be translated into cash. The landlord,

too, can serve a useful function as the responsible agent through and by whom uniformity of seed can be organised. Fruit, taking a long time to mature, and tobacco, requiring much skill during growth, are less adapted to the system.

There lies here, as has been said, perhaps the most difficult problem with which, in the development of the tropical portions of the Empire, Government is faced. And it is not merely as arbiter of the fates of the native and of the white settler, whose right to be considered is established and cannot be ignored, that Government comes into contact with the problem. The demand for labour is in excess of the supply, not merely for agricultural purposes, but for those developmental works such as railways, of which the construction is carried out under the direct auspices of Government. Government is itself, therefore, a competitor for paid labour, and being itself alien is, perhaps, tempted to place as a measure of progress such material and impersonal factors as are usually found in statistical returns before the more imponderable and personal factors which fall under the heading moral. It is essentially one of those cases in which the dynamic aspect requires to be kept constantly in mind. The pressure towards immediate progress, which finds a record in statistical returns, must inevitably lead to the emphasis of the static aspect of the problem, the result of which can only be the creation of a landless community with the partial or complete suppression of the tribal system; a collapse which would be final for, when once destroyed, that system could not be recalled into being. It may be said that the tenancy system, tentatively, and without dogmatism, suggested above does not necessarily create the same irrevocable breach with local tradition. *Festina lente* is a motto that applies with full force to the case, even if its application appears to have an immediate retarding effect on the statistical returns.

Lastly to be considered are those areas, so arid and inclement that agriculture is practically non-existent, and population of the sparsest. In these tracts any appreciable return can only be secured as the result of extensive irrigation works which, in their turn, are only possible where a river of sufficient

volume is present to supply the required water. Development here may take place along one of two lines, the deciding factor being the availability of a population. Where pressure of population in neighbouring areas is heavy, the process is one of a natural overflow of that population into the newly opened up area. Government here provides the capital, and carries out the work and merely extends its land policy to the new area. Where that population is not available, the world's demand for produce provides the stimulus. In as much as water diverted in this manner will not be available elsewhere, interests other than the purely local ones will be involved, an impartial agent will be required to adjudicate, and Government must, therefore, approve the scheme, lay down the conditions and assume the responsibility for seeing that they are fulfilled. It must receive a legitimate share of the return, representing the communal share in the product of the natural amenities, but, in the absence, complete or partial, of a local cultivating community, the protection of the interests of that community become a secondary consideration. The days of chartered companies functioning as Government, development agent and trader are numbered; the function of Government cannot be associated directly with either of the two remaining functions. Government can, however, legitimately grant concessions for the development of the area to a capitalistic agency, and this would in fact appear to be the only practicable method; for, in the absence of an adequate local population, resort must be had to mechanical methods for the major cultural operations, and these involve considerable capital commitments for which security is required, a security which can only be obtained from a controlled monopoly. As has been pointed out, while the main functions of Government and the developing agent are clearly marked, there are a number of functions less clearly assignable, such as the actual distribution of water, the organisation of seed supplies and research; the terms of the concession should define with some degree of accuracy the line demarcating the relative spheres in these less well-defined matters.

Here again problems difficult of solution will arise in the adjustment of the conflicting claims of the monopoly holders and the local population whose future welfare it is one of the functions of Government to secure. For, though there may be originally no local population, mechanism cannot entirely replace manual labour in the field. Labour, if it be not present in the first instance, will be attracted, and its future progress must be safeguarded. The difficulty arises from the fact that the monopoly holder now functions as landlord in the main essentials, and the gap between the landlord in this form and the individual cultivator is too great to be bridged by any individual effort. There is yet one further consideration: the tendency of all monopolistic organisations in agriculture is in the direction of specialisation. Effort is directed to a particular crop, the crop that is most profitable under the market conditions, to the exclusion of others. This leads to unsound agricultural practice, with the neglect of rotations and frequently of fallows. The selected crop is grown too frequently on the same land and in too continuous belts, with the result that the plant becomes unhealthy and susceptible to disease, which may assume epidemic form.

As before, Government, in its rôle of impartial adjudicator, is faced with a most difficult problem which it can only solve by recognising from the first that it is a dynamic problem. The static condition at the moment may suggest, as adequate and equitable, a simple solution which, under later conditions, becomes inadequate and inequitable. It is not possible, therefore, to dogmatise, but it would appear desirable to place a term to any agreement, at the end of which term that agreement would be subject to review on the two points of the share to accrue to Government and of the status of the labouring community.

In the preceding pages of this chapter there has been assumed the existence of the primitive conditions of a new country as yet unaffected, or but slightly affected, by the clash of modern civilisation and with the human element still organised on a tribal basis. These are the conditions most amenable to guidance and offering the widest freedom for the

introduction and shaping of that land policy which can be most readily moulded to the varying stages of evolutionary progress. But in many of the tropical dependencies of the Empire these elementary conditions do not hold; many have already progressed several steps along the evolutionary route, while others have already advanced so far along that route that a static condition has been attained which leaves little opening for further material progress. In such cases the foundations of a land policy have already been laid down, for that policy is shaped by the practical steps which have to be taken during the initial stages; and it is rarely possible to introduce material changes into a policy which has once been established and become recognised. Once a policy has been adopted, private interests will arise which derive their value from the security which the recognition of that policy confers, and such interests, legitimately established under an accepted system, cannot be lightly disregarded; action which leads to any material reduction in the value of those interests partakes of the nature of partial sequestration and would stultify itself through the feeling of insecurity aroused. In these cases, consequently, policy is, in greater or less degree, determined by the stage of progress attained and by the policy under which that progress has been made.

Here it is necessary to distinguish between the two branches of land policy, namely, that which concerns itself with the communal share in the return from the land, the land revenue, and that which concerns itself with the cultivator's share, the land tenure policy. A brief glance may be given at the former. The earliest experiments in tropical colonisation were carried out in an age when human rights earned little respect and the full fruits of victory went to the strong. Amid the wars waged between the different European nations for the control of the coveted areas the rights of the indigenous populations received short shrift. The conquering races, brought up under a system which recognised land as the legitimate possession of the individual, were not slow to apportion the land among themselves. The results are traceable in the Carribean islands, whose small size and rich soils rendered them a rich and, more

important, under the limitation of the transport facilities of the period, a readily accessible field of agricultural wealth. With the evolution of settled Government these claims received recognition and acceptance and, except for a small and constant tax, land was confirmed as a legitimate form of private property. Land so acquired is held in large areas, to work which a labour supply is required and, in the absence of an indigenous population, this supply has to be imported. In this demand for labour capable of working under a tropical sun, originated the slave trade. Later, with the emancipation of the slaves, small holdings, directly held, grew up alongside the large estates, while the demand for labour on these led to the indenture system which, in its turn, has produced a further extension of small holdings. Early in this development, Government relinquished its claim to any share in the produce, and to any share in the incremental value. Property has changed hands on that basis, and any reversion to a land revenue system such as has been described is not practicable.

At a later date a more humanitarian view prevails, and a certain moral obligation towards the indigenous population is recognised. The obligation is fulfilled by the ascertainment and record of all rights to land as far as this is possible. In view of the ignorance of local custom which commonly prevailed, these records are generally made and interpreted in terms of the traditional ideas held by the power assuming control, ideas which may be, and sometimes are, opposed to local custom. Land to which no claim can be substantiated becomes the property of Government, and may be alienated at the discretion of Government, to members of the community or to foreign interests. For land so allocated, whether under the original settlement, or under subsequent alienation, a fixed tax is usually imposed; the chief function which this tax appears to serve is that of assuring the automatic maintenance of the records and of securing evidence of the areas voluntarily relinquished. Alienation of small holdings under this system are common in the West Indies while, as an example of the alienation of large areas of what have come to be known as Crown lands, the rubber estates in Malaya may be quoted. Frequently

a proviso is made by drawing up the form of alienation in the shape of a lease for a number of years. Unless, however, the duration of the lease is for a limited number of years, more limited than is usually the case, this proviso is not the equivalent of a temporary settlement, and does not ensure to the community the incremental value of the land.

In both the above cases, therefore, the incremental value accrues to the individual, and the communal interest is limited to the cash value realised at the time of alienation, together with the small annual tax where this is imposed. Where the system is permanently established a reversion to a policy involving intermittent settlement is impossible. In the transfer of land from individual to individual, especially when one or both of the parties to the transfer belong to the dominant race, the price paid takes into consideration not merely the actual value of the land at the time of the transfer but also the potential value which includes an estimated figure for the incremental value. Realisation by the community of a share in that incremental value cannot now be imposed without injury to the new owner for which he could legitimately claim compensation. Where development has proceeded on these lines, therefore, it would appear impossible for any material diversion of the incremental value to Government to take place and the system of intermittent settlements becomes limited in its application to those areas which have not progressed so far as to have assumed a definite form of land policy.

The question of rent and rent policy is a wider one, for Government here represents the adjudicator and is not a party to the contract with direct interests. Where the area of Crown lands is considerable, Government can do much towards determining the unit of cultivation by restricting the area it is prepared to alienate within defined limits; but if it agrees to alienate large areas it can do little to regulate the system of cultivation within that area. The decision whether that cultivation be by paid labour or on a tenancy system must be based on economic considerations and left to the discretion of the owner. If, however, it determined the size of the unit saleable at that which the family can conveniently work,

Government is definitely adopting a two-party policy with the elimination of the landlord. Such a policy raises questions which it will later be forced to consider. It raises questions as to the source of supply of capital, of the organisation of markets and so on, questions which find their answer in a state-aided and state-controlled co-operative movement. It raises questions as to the position of land under the laws of inheritance owing to the dangers which arise from uncontrolled partition of land with the resultant evils of scattered and uneconomic holdings. The discussion of these questions is outside the present scope, and the subject must be left with this indication of the nature of the problems which an accepted policy of small holdings, with titles derived directly from the state, calls into being.

Where, however, Government fixes the unit at a larger area and definitely accepts the three-party system, its function, where a tenancy system is adopted, is limited to that of maintaining freedom of action in bargaining between the two interested parties and its tenancy legislation, will have from time to time to be amended as conditions change. It lies with the remaining two parties, and especially the landlord, to determine how far a triple partnership is economically sound. This will, in part, depend on the crops grown, and it is, perhaps, unfortunate that so many of the crops which supply the markets of the world are highly capitalistic crops. The effect of this is twofold. The capitalistic agent is, in these cases, almost inevitably an alien who traditionally leans to a system of cultivation which eliminates the tenant; he is, further, very frequently impersonal, a company or syndicate, and inevitably the annual financial returns receive precedence. It is recognised that an efficient body of tenants will not be immediately available, and will have to be built up; and in the time that will elapse, which may be long, the direct method of cultivation will more than probably give the more economic return. If it is admitted, as it must be, that the insistent demand for tropical produce is legitimate, and has to be met; and if it is admitted, as again it must be, that capitalistic development is the only present means of meeting that demand, the only logical conclusion reached is that freedom must be left to the capitalistic

agent to adopt that system of cultivation which gives the best return, even if it is that which under the view expressed, will not be the most advantageous in the long run and which does not conform most fully with the spirit of modern views of the responsibilities. The problem of the future is to reconcile the divergent interests, and this is largely a matter of education. Provided an estate manager receives an adequate supply of produce from the land, it is merely a question of costs which will decide between the two systems, and labour organised on a family basis will usually prove the more economic. A spirit of co-operation on the side of the manager and a more intelligent attitude on the part of the labourer should go far to popularise the tenancy system in the case of those crops which lend themselves to this system.

CHAPTER VI, THE EDUCATIONAL PROBLEM

IN the course of the preceding pages repeated reference has been made to education. It is a subject which may appear to be, and undoubtedly is, distinct from the subject of land tenure. Nevertheless all human activities are to some extent interdependent, and in this case the interdependence is of such a nature that the systems which have been indicated for the latter, and especially the system involving a triple partnership in the land, can only prove effective if the educational development is attuned to the conditions. This must be the excuse for turning aside to consider certain aspects of education.

Of all the literature on the subject of education among backward races, backward, that is, in the sense of the materialism of the modern world, none is perhaps more germane than the famous minute of 1835 by Lord Macaulay on education in India. The subject under discussion in that minute was the method of expending the sums set aside "for the revival and promotion of literature, and the encouragement of *the learned natives** of India, and for the promotion of a knowledge of the sciences among the inhabitants of the British territories"; and the question at issue was the teaching of Arabic and Sanscrit. Macaulay favoured, and pressed for, the adoption of English as the medium of instruction, and, as is well known, he carried his point, modern methods of education in India dating from that time. The minute has become the Magna Charta of Indian education. It is not this fact, however, but the arguments he used, that make the minute a document of such interest. His first point is to establish the necessity of adopting English as a medium, and he points out the impossibility of conveying a meaning in a language devoid of essential words.

* The italics are not in the original.

His second point strikes at the foundation of all education. The world, including India, was, even in those days, ruled by materialism. Sanscrit and Arabic, the official educational pabulum, were not only foreign languages with a literature inferior on the imaginative side, but contained a record of fact and general principles immeasurably inferior to like records in English. The history recorded in those languages abounds with kings thirty feet high, and with reigns thirty thousand years long; the sciences are represented by "medical doctrines which would disgrace an English farrier, astronomy which would move laughter in girls at an English boarding school and geography made of seas of treacle and seas of butter." Such matters are not an education for a practical career; and what is the result? Government is compelled to pay students to come and learn Arabic and Sanscrit, while students are willing to pay to be taught English. More than this, the student who has learned Arabic and Sanscrit at Government expense appeals to Government for employment. "We want means," they say, "for a decent living, and for our progressive improvement, which, however, we cannot obtain without the assistance of Government, by whom we have been educated and maintained from childhood." They represent their education as an injury which gives them a claim on the Government for redress, as an injury for which the stipends paid to them during the infliction were a very inadequate compensation; and Macaulay adds, "I doubt not that they are in the right."

As the result of Macaulay's minute English was adopted as the official medium of education, and again, what is the result? Nearly a century has passed and anyone who has had educational experience in India will be only too familiar with the same appeal, though voiced in words less forceful than Macaulay's; Government has educated us, it is the duty of Government to provide us with a post. A hasty judgment might conclude from this undoubted fact that the decision which Macaulay advocated was wrong, and this is a view not infrequently expressed. It is only necessary, however, to balance the good against the ill to see that this is not so. Without English, both as a common medium and as a language wide

enough for the fullest expression of thought, development on the vast scale now in being would have been impossible, and the expansion of population the century has witnessed could not have taken place.

The cause for the persistence of the *argumentum ad misericordiam*, so frequently advanced by students, is not then to be found in the teaching of English, and has to be sought elsewhere. That cause, it would appear, lies in the three words "the learned natives" italicised in the first quotation from the minute given above. India at that time resembled Europe towards the end of the Middle Ages. It consisted of a congeries of races at perpetual feud with each other. Thrashed into apparent unity it was by one dominant and perhaps alien power, Mahratta or Mahomedan, in much the same manner as the militant inquisitorial power overcame Europe; but that unity broke down into chaos as soon as the dominant authority weakened. Socially it consisted of a landed aristocracy, and a peasant class ground down and at the mercy of the nearest authority having sufficient power. The break-up of the social system of the Middle Ages in Europe led to a spread of education, previously restricted to the religious bodies and to the wealthy section of the community; and, in those days, wealth usually took the form of land. Education of the masses came later, and at the time of the minute 1835 had hardly been considered even in England. The expression "learned natives" clearly indicates a special section of the population, and what Macaulay visualised was the dissemination of learning, as in England, among the wealthier sections of the community.

This, however, is not what has happened. Schools and colleges were looked at askance by those sections of the community it was the intention to reach. An expanding Government, aiming at a high degree of efficiency, created a large demand for subordinate clerical officials, while the higher posts were rigidly conserved for the alien official. The schools and colleges thus drifted more and more into the status of training grounds for recruitment to these subordinate posts. Their appeal was, and is, to the youth of the poorer section of the community; the certificate of the institution is not

considered a hall-mark of ability but a means of securing service. A large industrial development has also taken place in recent years, and, as in England, a flow of the youth of the country side has set in towards the schools of the towns but the main educational appeal is still Government service, followed by the legal profession, with clerical work in connection with industries taking third place.

This effect of the venture in education might have been different if its early stages and expansion had not set the literary seal upon it. That type of education, the only one which at that period could be adopted on the basis of English, might have proved successful if "the learned native" had presented himself. A technical education, at that time hardly known, might have succeeded with the actual type of student which did present itself. In a certain and no doubt considerable number of individual cases, the results appear to have justified the experiment, but considered broadly, the policy has unquestionably failed. It has sent forth into the world a host of youths who have "wasted the best years of life in learning what procures them neither bread nor respect. Surely we might with advantage have saved the cost of making these persons useless and miserable. Surely men may be brought up to be burdens to the public and objects of contempt to their neighbours at a somewhat smaller charge to the state."

This then is the error into which Indian educational policy has fallen, and from which it is but slowly extricating itself. Macaulay was right in insisting on English as the medium which could open up to India the knowledge of modern thought. He used for that purpose the literary form, the only then known form, of education, and a form which, suitable in every way to a certain section of every community, is quite unsuited to that large section which must live by production, and which requires to learn what will help them to secure bread. Yet it is to these latter sections that those responsible for the subsequent development applied it. The evil was dual; for the real "learned native" whom a literary education might have benefited avoided it.

The error was in this case excusable, for when the policy was initiated technical education was unknown. It is now a much-studied subject, and a repetition of the error is unpardonable. Yet it cannot in truth be said that all danger of its recurrence has been removed. Human nature, being what it is, the talker will always have a more effective say in communal affairs than the worker. Human nature, too, as a body, lacks the capacity for projecting itself into another's position. The weight of voiceful public opinion is thus definitely directed against the worker, and that opinion pays no effective attention to the fundamental truth that someone must produce the material wealth on which the mass of human beings live.

If the truth of the preceding paragraph is conceded, and this can hardly be doubted, certain conclusions must inevitably follow. The mass of the population must, for a sound and healthy communal development, have offered to them a form of education which will adapt them to earn a livelihood by that method of production on which the community depends for its existence; broadly agricultural or industrial. It would be better to say agricultural and industrial, for though every transition may be found between agricultural and industrial communities, the extreme forms in which the one or the other is to be found in a pure state are practically non-existent. The essential feature is a training for productive work; whether it be agricultural or industrial is a secondary matter.

It is time to turn from this more general to the special case, with which this book is particularly concerned, to that of tropical development and land tenure in the tropics. Here the problem is agricultural, for in few if any of these countries, exclusive of India, is the problem of industrial development an urgent one, and certainly it is not the most important one. Their wealth lies in their agriculture. Education, therefore, must aim at fitting the masses of the population for an agricultural career, and for this purpose the literary education usually introduced is about as unsuitable as can well be imagined.

If, however, success has been achieved in the development of the arguments set forth above, it will be plain that tropical agricultural development, if progress is to be made, is not simple, based on the individual as the unit. It will be based on a complex organisation, requiring for the different stages individuals of very different outlook and training. Capital no doubt will have for an indefinite period to come from without, possibly also trade organisation; but accepting, as must be accepted, the British policy expressed by the word "mandate," there is no reason why, with suitable training, a class of the indigenous population should not be educated up to function as "landlords" in the sense defined. The education and training required to enable youths to fill effectively this rôle in after-life is entirely different from that required for the youth who is going to cultivate his own land, and the type of education which is now accepted as a standard is ill adapted to either. It is true that nothing in the nature of the landlord class as contemplated, unless it be alien in origin, is as yet in existence in most of the countries under consideration; but the position of landlord is not merely a matter of education, it is largely one of tradition. Tradition already exists and divides the population into two sections, the chiefs and head-men, and the mass of the village community. Educational policy, therefore, should be directed to training the chiefs and head-men to develop into useful members of the community, and also to training the direct cultivator, whether a holder or renter of land, in the art of cultivation; it must discard the literary forms hitherto practised which raise up a body of men, unable and unwilling to work with the hands, and discontented because they are too numerous for the limited field offered to them by such openings as the subordinate clerical posts under Government and as the legal profession present.

The first duty of civilisation in these countries is to increase their material wealth by the development of the potential resources. Only as and when such increase takes place will the funds be available for a general educational policy to be taken in hand, and such funds as are now available for the

purpose should be devoted to that type of education which will promote material development most rapidly. For a contented community, desires must be co-ordinated with capacity for their satisfaction; to stimulate desires which cannot be satisfied is to sow the seed of discontent. It is along this path that an educational policy of the literary type with its schools leading to colleges thrown open to the masses leads. To revert to the words of Macaulay:—"I feel . . . that it is impossible for us, with our limited means, to attempt to educate the body of the people. We must at present do our best to form a class who may be interpreters between the millions whom we govern."

This is hardly the place for any detailed discussion of the form technical education should here take, or of its relation to the general educational policy nor is there any close precedent which could act as a guide in the particular case. Briefly, however, it may be said that the subject falls into two branches, the former of which is concerned with the education of the masses; while the latter and more immediately important, if Macaulay's dictum be sound, relates to the education of the relatively few who hold a position as members of a landed class. But whatever the particular subject or aspect, technical education, to be complete and satisfying, not only involves a theoretical knowledge of principles, but requires practical experience as far as that be possible. In the industrial sphere the workshop and the laboratory are recognised as essential adjuncts of any technical institution; in agriculture, the holding or the estate is an equally essential adjunct. And that holding or estate should be managed and run on the economic principles under which such units are run in the best practice. Both in the subjects taught and in the facilities provided, therefore, the two types of agricultural institution will differ, and each again will bear an individuality imposed on it by the local conditions. In Appendix III is outlined a scheme for a school adapted to the masses and as influenced by the local conditions of the United Provinces, India. It may serve as an example of the former type. The latter type will be different; the subjects taught will be more advanced, and the age of the pupils will be greater;

personal conduct of the labour of cultivation will be less in evidence while, on the side of organisation, there must be provided an estate at least equal in area to the minimum that can be worked economically on the standard of the best practice of the country.

With the century of experience since Macaulay's minute was written, considerable progress in educational method has taken place. Technical education, then unknown, has made great strides; education of an agricultural population along non-literary lines has developed probably to a greater extent in such countries as Denmark and Belgium than in England. Yet owing to the pressure, of which the demand for an efficient subordinate clerical service is not the least, towards a literary education, advantage of this experience is not taken. A grave onus of responsibility will be incurred, and trouble will be laid up for the future if the signs are not read aright.

APPENDIX I

SOME THOUGHTS ON LAND TENURE IN TROPICAL AFRICA

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NOT the least among the areas now being developed in order to obtain additional supplies of cotton lie in Tropical Africa. From the north through the Sudan, from the east through Tanganyika and Nyasaland, from the south through Rhodesia, and from the west through Nigeria, the centre of the Dark Continent is being penetrated, while, in the interior, Uganda is already opened up, and active development is also in progress in Belgian territory. In all these countries the indigenous population is of a primitive type, organised, for the most part, on a tribal basis with more or less well-defined tribal spheres of influence. The relationship of the people to the land is nebulous. Intertribal strife and disease have hitherto taken their toll, and nowhere has there been attained a density of population sufficient to compel the crystallisation of this relationship into a definite system of land tenure. The peace which follows penetration by the white man, the fight against disease which is one of its concomitants, and the increase of wealth which results from development in tracts subject to that penetration, all tend to produce a rapid increase of population with a pressure on the land which, sooner or later, and in many cases sooner, will compel the adoption of some more concrete system if the path of progress is to run smoothly in the future. It is not a matter for doubt that the question of this future land tenure system should be settled in its broadest aspects at a very early date. For just as a microscopic crystal may determine the form in which a substance will be deposited from solution, so the essential features of divergent systems of land tenure are traceable even in the most elementary stages; what at the time may appear an unimportant decision will, not improbably, determine along which line the future policy of land tenure will proceed.

But while this question of land tenure will be inevitably raised by the compelling force of population, this force is comparatively slow in action; for, immigration being ruled out, it can only arise with natural increase. There is likely to be, and, in fact, there has already arisen, another force, the action of which will be much more immediate in its result. This force originates in the insistent and increasing demand of the world for wealth, primarily in the form of raw materials like cotton. Cotton is not the only commodity for which the world's demand is leading to the penetration of

new regions; cocoa and coffee exert the same influence, while minerals have in the past led, and will continue in the future to lead, to exploitation of such regions. This external pressure, especially when it is exerted by the demand for agricultural produce, must necessarily react on the land question. In the presence of large expanses of waste, but fertile, land, and in the absence of adequate population, the obvious and simple method for the immediate realisation of the latent wealth is extensive farming, with all the paraphernalia thereby implied. This, however, is a development which only becomes possible with the employment of external capital, and capital demands guarantees. At once the most satisfactory of guarantees to possess, and at the same time the simplest to give, is a lien on the land; at this stage it costs nothing in the giving, and no very material interests are affected. And herein lies the danger; for when the slower acting force of population begins to exert itself there remains no outlet for a population now landless, but working for a wage. Nor is this danger a remote one. Capital is alive to the advantage of the possession of land; it does not take into its calculations merely the value of the produce which is recovered as the immediate result of its intervention, it takes into account also the appreciating value of the land itself. Moreover, capital is available in sufficient abundance to create in many cases a land boom in which the "incremental value" becomes the primary, and the production of material wealth the secondary, interest. Nor is this action, indeed, confined to the external capitalist. Rarely are the indigenous races so completely backward that none among their component individuals realise the possibilities of the situation. With such people the acquisition of material wealth may cease entirely to be of interest, in which case land acquisition becomes purely a matter of speculation, a means of reaping the incremental value without labour; or they assume the position of absentee landlords and, by a system of rack-renting, attempt to divert the profits of production to themselves at the expense of the tenant.

The harmful, not to say disastrous, results which must follow either development require no emphasis; they can be avoided only by a clear and defined policy with regard to the land, thought out ahead, and consistently applied. That policy must take account of essential facts: the external pressure due to the world's demand for increased supplies, and the relatively slow rate of unaided internal development. The employment of external capital appears inevitable; nor need its employment raise fears if the dangers inherent in that employment are recognised in advance. The potential wealth is such that there is sufficient to repay handsomely all those taking part in its acquisition, and it is the function of the administration to see that the stronger party does not, in the early stages, monopolise the proceeds. Co-operation between the indigenous

population and its rulers has accomplished wonders in many directions, but there is an obvious limit to the scope of official co-operation. What is required is an extension of this co-operation to an external element capable of meeting the capital requirements of development. The key to the position is, as I believe, to be found in the land policy.

In practice the question of land tenure is usually approached administratively from one of two directions. The local system may be adopted and developed, or preconceived ideas, based on systems foreign to the country of application, may be put into practice; not infrequently one system is adopted at one stage, and the other at a later date. Both systems, if rigidly applied, have their defects. The local system is frequently unsuited to the modern environment with its rapid transport and world-wide markets. Localisation of crops, large units of cultivation, and marketing in bulk, are all better adapted to such conditions than are the small self-contained units so typical of primitive communities. Typical of the development of the former system is that found in Moslem countries where the law of primogeniture does not hold, and where on a man's death his property is divided up amongst various relatives, many of whom would not be considered in English law as having any claim upon the estate. I may instance as examples the Nile Valley and certain of the more densely populated parts of India. Pressure of population can, under such circumstances, produce only one result: minute sub-division, with the ultimate and inevitable goal, the uneconomic holding. On the other hand, a blind adoption of the latter system may be equally disadvantageous; unless introduced with a clear appreciation of the local conditions and modified accordingly, direct conflict may arise between local and foreign ideals and customs. A case of such an imposition is to be found in the permanent settlement of Bengal, where an attempt, ill-advised as the result has shown, to build up a yeoman class comparable to that typical of a certain stage of English history, has not only failed to accomplish its object, but has led to results which now, over a century later, raise a constitutional problem of no mean order.

In the present article I propose to adopt a detached attitude; to discuss on general and theoretical grounds the major considerations bearing on the question of land tenure, and to deduce therefrom the system which appears to be most suited to the object in view—the extraction of the maximum amount of wealth from the land, with a simultaneous assurance of the moral and material development of the native races. Such a system will then form a goal towards the attainment of which the development of the land-tenure system should be directed. It will then remain to be seen how far, starting from local custom, that system can be attained without any violent shock to that custom. By such means it may

be possible to avoid complications in the future, such as must otherwise inevitably arise. For conditions change; in the early stages the administrative problem is commonly the attraction of population and their settlement on the soil. Systems intrinsically sound under these conditions become uneconomic and frequently oppressive when a pressure of population begins to assert itself.

To keep the issue in its simplest form I exclude from consideration those portions of the continent which are, on climatic grounds, a "white man's country." I am here mainly concerned with the issue in cotton tracts, for it is in them that the question may become acute in the first instance, and the optimum conditions for cotton are not those under which the white man will readily undertake manual labour in the field or rear healthy stock.

If I were to attempt to define the aim of development in an agricultural tract I might, I suppose, say that it was to realise from the land that amount of produce which would, after meeting the needs of the producing population, leave the maximum residue for the consumption of others. There are here indicated two variable factors, a population and a bulk of produce, and there can be little doubt that there is an optimum density of population which would best achieve this ultimate aim. This, however, assumes the establishment of a static condition, and, as is only too obvious, such a condition is unobtainable, for there is invariably a tendency in a healthy community for the population to increase. Herein is to be found the reason why no rigid system can be evolved which will, in any tract, be suited for all time. Herein, too, lies the danger in opening up new tracts. These usually lack sufficient population, if they are not actually unpopulated. The pressure of circumstances compels early development to take as its aim the attraction of population; but a time will come when the optimum density has been reached, and then such an aim becomes inappropriate and even harmful. We have, therefore, to visualise development as composed of a series of stages, each of which, while aiming at momentary adjustment between population and production, is but a step to the higher stages. The static condition must be replaced by an evolutionary process exhibiting no marked break of continuity, and our land-tenure system must admit of such an evolutionary process. Clearly cases may arise where the immediate adjustment can only be attained by means which are definitely antagonistic to the line of evolution. In such cases the immediate benefits must be weighed against the prospective disadvantages, and action taken accordingly.

In this condition of flux there is only one definite and strictly limited factor, the land, which thus appears in marked contrast to the population. Development, consequently, will take a definite course; at the commencement, primitive methods and the expansion of population met by an extension of area under cultivation, giving

place later, when the limitation of area begins to be felt, to a gradually increasing intensity of cultivation with the adoption of improved methods. Long before the latter stage has matured, however, the differing qualities of land will have given to the more productive portions a definite value in the eyes of the people, and questions of ownership will have arisen. The problem, thus, is to determine what system of ownership is best suited to the passage from one stage to the next, while fulfilling, as far as possible, our definition at each stage of progress.

What, then, are the requirements essential to the achievement of the aim of development as defined above? In the first rank I would place peace and order, both external and internal. These are obtained only by a strong central authority, the outward and visible signs of which are an army, a police force, and a judiciary. Inasmuch as these require money for their maintenance, we must add to them a tax-collecting force also. The second requirement is money for development—in other words, capital. But capital is of two forms. One of the aims of development was stated to be the production of a maximum residue after supplying the needs of the population. Such a residue enables the population to satisfy its needs and desires for objects which cannot be produced locally; and it is for this purpose only that such a residue will be produced. Clearly also there must be a system of transport by which this residue can be carried to outside markets. In the tracts we are considering these markets are distant and the lines of communication are long. Capital on a large scale is required for such schemes which, to be effective and satisfactory, must be co-ordinated. On both accounts a central authority is requisite. As another class of schemes requiring for like reasons a central authority, I may instance irrigation works. A further reason for relegating such schemes to a central authority is that, in the majority of cases, they cut across several tribal spheres of influence; the knowledge and co-operative spirit necessary to supply the stimulus to development from within is lacking, and must be applied from without.

Passing to a more restricted field, we have need for capital to supply the ordinary implements of the field and the working cattle; to make permanent improvements to the land, such as clearing and levelling, to sink wells, and to build dwellings. Between these two classes of capital no clear line can be drawn. The essential consideration in making a distinction, and the consideration I would emphasise is the source from which that capital would be attracted, whether from the individual responsible for a unit of cultivation, or from an impersonal body not immediately concerned with the art of cultivation. Clearly, on this consideration, the line of demarcation will be drawn much higher in the case of large holdings, such as are characteristic of England, or the prairie lands of the American

Continent, than in the case of holdings of a few acres, or even fractions of an acre, characteristic of the rayatwari tracts of India.

To complete our survey of requirements for development we may add to these two essential forms of capital a third. Between the production and disposal of excess produce, time, and in fact considerable time, must elapse; in addition to expenses during the course of production the costs of packing and of transport have to be met, and are only recouped after sale. All these charges can only be met by a certain amount of floating capital, if the full value of the produce is to be realised. The main business of marketing is, of course, the function of the merchant, but, as in the former case, it is difficult to draw a sharp line of division between the capital which is properly supplied by the producer and that which it falls to the merchant to provide. Here, again, the line of division will vary according to the exact status of the producer.

I have so far indicated two bodies only as essential to production: a central authority, commonly called Government, responsible for peace and order in the widest sense, and a cultivating community responsible for actual production. We have to consider whether these two bodies alone are in a position to meet the capital requirements of development. Clearly a responsible and well-established central authority is in a position to make capital provision for work of the major class. It may do so directly by loan or indirectly through agents, who receive concessions of a sufficiently attractive nature. At the other extreme, even the small-holder is usually in a position to provide the implements of agriculture, especially when they are of the very primitive type found in Tropical Africa. Whether he is in a position to provide seed of good quality, strong cattle for cultivation, capital for levelling and, perhaps, draining his land, is more open to question. That he is in a position to market his crops with full benefit to himself is certainly not a fact. From this aspect the crucial question is the source of this capital. Clearly the central authority is not in a position to step in and provide such capital; apart from practical questions of control which such a step would involve, it is without doubt not the function of a central authority to provide capital to meet development of the social unit. We are here faced with what is a world-wide problem, the problem of agricultural indebtedness, and it must be met in one of the ways which have afforded a solution elsewhere.

Not the least of these ways is co-operation. Stated briefly, co-operation is the union of large numbers of individually small and financially negligible units into larger ones, and the linking of these to form a system which gives to them a stability and security which will attract capital both from their own units and from the world's supply. Co-operation has been a powerful force for the provision of capital in many countries, but its success appears to depend on

some elusive temperamental characteristic which is the possession of some races only. It is very doubtful if this characteristic is possessed by primitive races. Moreover, enthusiasts are accustomed to claim for the system an educative value. So far as my personal experience has gone, the educative value is only attained when the control is in efficient hands, in which case the system ceases to be co-operative, or its working is marked by an inefficiency which renders the organisation of doubtful value. Rarely can two birds be killed with one stone in this simple manner. It would appear that a certain minimum, and that a somewhat high minimum, standard of education is required to develop co-operation effectively, and there can be little doubt that such a standard has not yet been attained by the primitive tribes under discussion.

With the exclusion of co-operation as a practical solution of wide application, the line of argument I have followed has developed the need for a third agency, the chief function of which will be the provision of capital to be devoted to the development of the unit of cultivation, as well as of floating capital required for the earlier stages of marketing. Before, however, any individual or group of individuals will make such provision, one essential must be forthcoming—namely, security, and there is only one method of providing that security. The supplier of the capital requires some reversionary power over the products of the expenditure of that capital, which, as these are inseparable from the land itself, implies a reversionary interest in the land itself. The third party, in other words, must occupy to a greater or less extent the position of landlord. The problem begins to take a more defined shape, and may now be formulated as the determination of the position which this third party should occupy in the system of ownership.

To arrive at a solution of this problem we must turn for a brief moment to a consideration of the principles which are involved in any discussion bearing on the land, and, maintaining for the time being our detached attitude, we will consider this in its widest aspect. What has come to be known as the economic doctrine of land is based on the fact that, as already mentioned, land is a form of wealth which cannot be multiplied by human exertion; in consequence it asserts that private ownership of land is not justified. Its value is determined, as in the case of other commodities, by demand for use, and payment of this value for the privilege of use should be exacted not by an individual, but by the community. Virgin soil, as such, has small productive value; enhancement of the value of any particular piece of land is due to two causes: (1) development of the land itself, due to the personal initiative of him who has paid for the privilege of use, a cause intrinsic to the land itself and dependent on the will of the possessor; and (2) development of the area in which the land lies, a cause extrinsic to the land itself and independent

of the will of the possessor. The economic doctrine recognises that the provision for the development of the land itself is best provided by private agency; it recognises that "the surest way to bring about the abundant production of wealth is to secure to the producer the free disposal of what his exertions have produced," and it recognises that capital will only be forthcoming if security and a fair return on any capital so employed be established. While, therefore, it would leave any incremental value arising from the first cause to the possessor it claims that the incremental value arising from the second should accrue to the community. Incidentally it recognises the duty of the possessor towards the community, and exercises on him a certain compulsion to develop the intrinsic value through the need of paying to it the incremental value due to extrinsic causes.

The economic doctrine is hardly open to criticism on general grounds. Its practical adoption is a different matter, and bristles with difficulties. These difficulties, however, are less inherent in the system than based on vested interests which have their origin in established systems. None except an iconoclastic Government would sequester, without compensation, rights legitimately acquired under an accepted system and, if compensation is to be entertained, the advantage of a change of system is largely, if not entirely, annulled. Where, however, population is so scanty that land possesses no immediate value, there is little doubt that the economic doctrine affords the soundest basis for a land-revenue system. Its adoption in principle in areas such as we are here considering where pressure of population has not yet given land any appreciable value, is almost certainly sound. Its adoption, however, involves certain consequences, not the least of which is an accurate valuation of the land, of development, and of incremental values; it involves, in other words, a controlling authority which must be widespread and efficient if individual units of cultivation are to be considered separately. That such a complex organisation for effecting the valuation can be maintained in primitive countries is very questionable. Again, a need arises for a larger unit than the individual cultivator with which the central authority can deal; the economic doctrine—that is, when applied to the primitive conditions we are considering—seems to require for its application a landlord. He will be, however, a landlord in a very different sense to the landlord of English conception. He will be subject to an incremental tax, in reality a rent, levied by the central authority, and he will be an intermediary between the actual cultivator and the central authority, thus assuming, in part, the position of a tax collector. But while this position holds good, it remains only one of his functions, and his establishment as a mere individual to whom the collection of a land revenue has been farmed out must at all costs be avoided.

The word "landlord" bears so well-defined a sense in England that its use here may be misleading. It will be well, therefore, to emphasise the difference between the landlord's position under the economic and English systems. I can best do so by a brief reference to the system of Northern India. This system, instituted by Akbar, is based on a "settlement" which may be defined as a determination of the share of the produce to which the State is entitled. In many parts, such as Oudh, the collection of this assessment was farmed out, and a class of tax gatherers was thus established. With the breakdown of the central authority the tendency was for power to pass to these tax gatherers and, on the occupation of the country by the English, their true position was not appreciated. Imbued, as the rulers of that time were, with the English system, these men were in many cases accepted as landlords with proprietary rights in the land, subject only to the payment of the revenue assessment. Over the major portion of Northern India this assessment was, and remains, subject to periodic revision, and we have an approach to the economic system, the assessment taking the form of a rent which takes into account incremental values. It fails, however, to meet the full conditions of the economic system in that the enhancement is calculated on the entire incremental value, and not on that due only to extrinsic causes. In Bengal, Bihar, and parts of the United Provinces, however, the application of the English system was, in 1793, carried still further when the assessment was made permanent and unalterable. The economic system is here represented only by the small tax, the whole of the subsequent incremental value going to the landlord.

Effective development, whether considered from the purely economic standpoint or from the standpoint of the need for capital, demands thus a third party who will be in the position of tax gatherer in respect to Government and of landlord in respect to the actual cultivator. We have now to consider in greater detail the relationship between this "landlord" and the cultivator which will be most likely to achieve our object. There are, broadly, two systems: that which we may term the capitalistic system, in which the "landlord" himself cultivates large areas and employs paid labour to carry out the work, and that by which he leases the land in small-holdings of a size which can be cultivated directly by individuals or by small individual groups, such as the family. The first system may be more productive in the early stages, and there is, consequently frequently a great temptation to resort to it, but can hardly be doubted that it will not remain for long suited to the needs of an expanding population which has no industrial outlet, and must be supported on the land. On moral grounds, too, it partakes of the essence of wage slavery of which so much is heard nowadays. The second system would appear to be the one most

suited to existing African conditions, but it, too, is obviously open to abuse. Particularly is this so when population begins to exert a pressure on the land with a consequent rise in rents. In such circumstances the "landlord" may find a life of idleness more to his taste; in this case he becomes non-resident, and the rents are collected by a bailiff. In the result we have all the evils of rack-renting.

This, however, is the reverse side of the shield, and there is another. Suppose he remains resident; suppose he invests his capital in the land and its improvement; suppose he advances seed, manure, and so on to his tenantry, and suppose he sells the aggregated produce collected from his tenantry so as to secure, in part at least, the profits resulting from bulk handling, and divides these between his tenants and himself. He will, if he do these things, do more to attain our object of securing the maximum of excess produce than could any other person or organisation. The system at which we have now arrived will be at once recognised; it is the *métayer* system of France and the Continent. Its strength and its weakness will also be recognised; the personal interest of the "landlord" in his estate, and his contact and association with his tenantry are essential to success.

The organisation which the preceding arguments indicate to be best suited for agricultural development involves a triple partnership composed of a central authority as representing the community, a "landlord," with a prescriptive right to the land so long as he pays the assessment, and a cultivator. The relationship of the two former is that of landlord to tenant, the true economic relationship, the central authority taking a rent for the use of the land, and a rent which is subject to fluctuation. It would absorb any incremental value due to causes extrinsic to the land itself, and exclude such value when it is due to developments dependent for their initiation on the possessor. The relationship between the two latter is one of co-operation, the "landlord" providing the capital required for development and receiving his interest partly in enhanced rents, but especially in his share of the excess produce. We have now to see how far this idealistic scheme is compatible with local conditions and whether there is anything in it antagonistic to local custom. In the first place, we may consider the attitude of local custom towards the land.

This point may be dismissed in a few words. It appears to be the rule throughout Tropical Africa that the land belongs to the tribe, the chief of which "allots unoccupied lands at will, but is not justified in dispossessing any family or person who is using the land." Further, "conquest vests the control of the land in the conqueror." The way is, therefore, wide open for the introduction of the economic system. But if we omit certain centres which have assumed an

urban condition, and if we limit ourselves to the consideration of purely agricultural tracts, density of population is, as a rule, insufficient to give an economic value to the land, for no economic value can exist when a commodity is in large excess of the demand. The central authority, however, requires funds and, if it is to rely for these on the economic rent, it must establish conditions which will give a value to land. This it would appear to be in a position to do, while acting in strict accord with native custom. As ruling authority, it is in a position to claim all land as belonging to the State; of occupied land it will recognise the inalienable right of the possessors subject to the payment of the assessment, and of unoccupied land it will claim a right to disposal. By such action it can not only adjust the release of land to meet the needs of a growing population, but it can take under its own charge and develop as forest areas unalienated lands. It can thus establish an economic rent, possibly only a small one, immediately, and at the same time protect and develop in the interests of the community, and, in view of the rapidly constricting forest areas, in the interests of the world at large, those areas not required immediately for agricultural settlement.

Before, however, the revenue derived from the establishment of an economic rent is likely to become appreciable, the administration will require funds. These can only be found in one or other of the many ways now used. We have here no direct concern with these ways of obtaining funds, except in so far as it appears desirable to indicate their real nature, and thus to facilitate their substitution by an economic rent as soon as the volume becomes sufficient to provide the administrative needs. Head, hut, and cattle taxes are in the nature of an income tax, and form a convenient rough-and-ready method of estimation and of equitable distribution of the burden. The Koranic tax of one-tenth of the produce falls into a different category, and is of the nature of a tithe. Clearly it covers in part the economic rent, since it would include the value which attaches to the produce owing to extrinsic causes, such as the cheapening of transport by roal and rail construction. But it covers also the value which attaches to that produce owing to intrinsic causes, and is, to this extent, an unsound tax. It is open to objection on other grounds, in that it is the application of the *métayer* system as between Government and cultivator. Experience has shown that an equitable application of this system is only obtainable so long as the landlord retains a personal interest in the land and its development, and that it breaks down when pressure of population forces up rents and makes it possible for the landlord to draw a fair income from those rents while absenting himself. As between the cultivator and an impersonal partner, the State, which of necessity must work through agents, the system is impossible. It is unnecessary to dilate

on the openings which lie to the hand of a staff, having no direct interest in the result, which must be large if the detailed yearly or seasonal valuation is to be carried out expeditiously, and will probably be ill-supervised if the cost is not to be prohibitive. These taxes, therefore, should be replaced as opportunity occurs by an economic rent, for this requires no such staff and no such detailed work, since the annual valuation of produce which should be placed on the market expeditiously will be replaced by a periodic settlement. This the presence of a third party renders possible, the function of that third party being in the nature of a buffer by which the financial shock of bad seasons is absorbed.

There appears, then, to be nothing in native custom antagonistic to the introduction of an economic rent; in fact, the native attitude appears to be in remarkable accord with the economic doctrine. The second essential to the scheme we have arrived at on theoretical grounds, an intermediary between the central authority and the cultivator, must now be discussed. The organisation commonly in force has been described as tribal. With the omission, for the moment, of the central authority recently superimposed on the indigenous population, tribal authority centres in a chief who rules over a greater or less area. In his hands lies power over the land—to give, but not to dispossess. Subordinate to him, and according to the extent of his sphere of influence, come district and village headmen. The unit is thus communal, the village, and there is nothing to correspond with the estate unit such as the landlord system, even in the modified form here outlined, demands. The class, in fact, has to be created.

This organisation is, without doubt, temporary. With development land will certainly acquire an economic value, and the inevitable result will be the speculative acquisition of land. It is more than questionable, however, whether a landlord class so originating will benefit the country; experience gives a very clear answer on this point. Either the landlord becomes absentee and rack-renting results, or he dispossesses the local population, who then occupy the position of wage earners. The landlord whom we have in view will not arise in this manner, and it becomes the function of the central authority to see that these two forms of landlordism do not arise. Dispossession is easily guarded against, though care must be exercised if other evils are to be avoided, but rack-renting offers a far more subtle problem.

Where the "landlord" of the type we have visualised is to come from is hardly a matter for generalised consideration, depending as it must on individual characteristics which differ from race to race. The main generalisation is that the community is a graded association, passing from the chief through the district and village headmen to the family and individual cultivator. Across this continuous

series a line has to be drawn somewhere, the organisation above forming the administrative agency and that below the productive agency. It will be in the uppermost rank of the latter that our "landlord" must be sought. Under this generalisation the position of the chief is clear; he falls naturally into place as part of the controlling authority and, as such, he forms a unit through whom the external authority will work. The conclusion that our "landlord" is not to be sought among the chiefs is sufficient for our purpose, and I need here only point out that this conclusion is in agreement with the views so ably pressed by Sir F. Lugard. The same argument applies to the district headmen; their status is rather that of an executive authority or agent than of a potential landlord. Though there is nothing to prevent them holding the dual position, their primary function will be executive. In the case of the village headmen, the argument is not so clear, and it is possible that they may provide recruits for a landlord class, but my own view tends to associate them as a class with the executive, while recognising that individuals may assume the position of landlords.

The conclusion, then, is that a landlord class in the sense indicated does not exist, and if we are unable to indicate with any certainty whence it will arise, we need not be unduly alarmed. The conclusion itself is not surprising, for landlordism becomes a desirable object only when an economic value has come to be attached to the land. That such a class will arise is inevitable, and it is the function of the central authority to direct progress so that that class, as and when it arises, may be guided to fulfil the function allotted to it. With this object possession of the land should be accompanied by sufficient restrictions to ensure avoidance of those abuses which are known to arise when pressure of population has given to the land a value that is real. Especially should those restrictions ensure a perpetuation of the small-holdings system; freedom to sell must be granted, but should be subject to restrictions which will safeguard the interests of the tenant on the one hand, by the recognition of a certain fixity of tenure, while the interests of the landlord on the other hand must, in like manner, be protected from the evils of too intense partition. These are points which it is impossible to discuss here, and attention can only be directed to them.

It will take us too far from our subject to deal in any detail with the educational aspect which these problems raise. The conclusion that a "landlord" class has to be created, however, gives to the educational problem such a direct interest that I cannot pass it over in complete silence. In the discussion of educational matters, as it appears to me, two vital considerations are usually overlooked. The Americans alone appear to recognise that a relation must exist between education and the economic standard of living. An educational policy which is based on literature and the humanities is

ill-suited to the needs of a population which has to live on and by the land. Again, a policy which aims at the production of a highly trained and somewhat specialised class is unsound if applied to the community as a whole. Educational experience shows that any random collection of students falls naturally into three groups: a comparatively small group composed of students of an intelligence well above the average, a similarly small group composed of students of an intelligence well below normal, and a third, and by far the largest, group of about average intelligence. The only sound policy for general education will be that which aims at best fitting this large group of average students for their normal work of life—namely, the earning of their daily bread. Unfortunately, in the case of such populations as we are considering, when they first come under British jurisdiction, the obvious need is for a clerical staff to carry on the work of administration, and educational policy inevitably assumes a literary basis as being best suited to meet this need. Further, the high standard of efficiency sought after forces the standard up to a degree from which the brightest students only can derive benefit. The advantage of a highly educated and efficient administrative staff is undoubted, but the price paid is too high if this efficiency can only be obtained at the expense of the mass of the population.

Omitting the question of primary education which the mass of the people require, I visualise the more advanced type of education best suited to the conditions to be that which will have as its main object the training of the more influential section of the population, to which such education should, in the first instance, be limited, to fulfil their productive function in the economy of the country. In an agricultural community this function is, undoubtedly, that of a "landlord" in the sense in which we have used the term. It is possible that there would be a certain decrease in administrative efficiency, but this evil, if evil it be (for administration is a good servant but a bad master), is incomparably the lesser one. Moreover, this decrease of efficiency is by no means inevitable. The average life of any community or of any class of a community is of necessity somewhat humdrum, and it is far from improbable that any educational policy directed to meet average needs will throw off the more intelligent as judged by other standards. It should not be impossible to provide an outlet for these and render them efficient administrative officers. My plea thus is for a reversal of the order of educational aims as usually accepted; a fitting of the average student for a productive after-life is placed in the forefront of the educational policy.

I proposed at the commencement of this article to discuss the question of land tenure in those countries, mainly in Tropical Africa, which are likely to be affected by the demand which exists

at the present time for larger supplies of cotton. That discussion has led us to develop a scheme which postulates the existence of a class, the "landlord" class, which does not exist. The raising up of such a class is a question of education, and will necessarily be a slow process, too slow, in all probability, to meet the insistent demand for more cotton. Such an insistent demand takes practical shape in high prices, and such high prices form the attraction for the capital on which development depends. The slow process we have outlined, therefore, seems likely to be anticipated by a development based on capital introduced from without, and the scheme of development at which we have arrived, consequently, exposed to a somewhat rude shock from the introduction of a fourth interest—the outside capitalist. The danger is apparent, but perception of a danger goes more than halfway towards meeting it. From the political and administrative aspect, agricultural development is one of the surest methods of introducing law and order into a primitive country, and an inflow of capital devoted to this purpose is one of the surest methods of attaining that pacification rapidly. As was pointed out at the commencement, it should be the business of the administration, while doing all it can to attract capital, to see that the dangers accompanying such an inflow are avoided and, more especially, that the foundations of the indigenous social organisation are not sapped.

The issue here raised is an important one, and should be clearly recognised; it will be well, therefore, to expand what has been already said on the subject. Availability of external capital is ultimately an expression of the world's needs for that produce which the country is in a position to provide, but which will not be forthcoming if the internal impetus to production is alone relied on. It is, therefore, an issue between the world's needs and the local rights. I would advance the view that it is no longer possible to admit the right of any community to the unquestioned possession of a portion of the world's surface merely on the ground of occupancy. Such a right carries with it a complementary duty, that of the development of local resources; what the economic doctrine recognises with regard to the individual applies with equal force to the community. While, therefore, occupancy gives an *a priori* claim to possession, there may be occasions when that claim has to be over-ruled in the interests of the world at large. The position here is in some respects similar to that referred to above when discussing the introduction of an economic rent. It was then pointed out that none but an iconoclastic Government would sequestrate, without compensation, rights legitimately acquired. In that case it was also pointed out that the cost of compensation would annul the value of a change. Those rights, however, in a country such as England, have been acquired with

a definite knowledge of the potential incremental value and with an eye thereto. Here this is not the case, and the possessor has no appreciation of any incremental value; compensation, therefore, will be comparatively light and may, in certain cases, be justifiable. This it is for the administration to decide—to decide, that is, between the claims of the indigenous population and the needs of the world at large and, if the decision is in favour of the latter, to settle the extent and form of the compensation to be offered. It is one of those cases, earlier adumbrated, where the immediate adjustment between population and production can only be attained by means definitely antagonistic to the line of evolution.

This aspect need, however, delay us no longer. In what follows I assume that an indigenous organisation is ultimately to take over the responsibility, and external capital merely employed to expedite, and to supplement the means of, development. Clearly the primary consideration is the direction in which such capital is to be applied. As I have indicated earlier in this discussion, capital serves two functions, the broad distinction between which is, that one falls appropriately within the range of the individual, whilst the other, owing to the area influenced, falls within the range of the State. This is a distinction that must be kept in view if errors are to be avoided and difficulties not to be raised for the future to solve. In the case of every proposal for the application of external capital, therefore, the question should be asked: Is the object to which this capital is to be applied the legitimate function of the community, as represented by the controlling authority, or of the individual? In the former case the settlement of the conditions of employment is a relatively simple matter. The development is, in the first instance, a matter for the State, which can proceed in various ways, by an appeal to the money market for a loan, by a system of agency, or by the grant of concessions. Which method will be the best to adopt will depend on the particular scheme and on the particular views held as to the relative efficiency of direct State, or private, enterprise. In the latter case, care will have to be exercised to prevent undue interference with the landed rights of the indigenous population. Freehold grants of land to external capitalistic bodies for extensive farming, however, attractive in the first instance, are to be deprecated. However harmless it may appear at the time, such a grant is the first step to expropriation of the people and to the establishment of wage slavery in agriculture. Grants of land, if so given, should be on terms strictly limited, the grantees merely exercising the function of landlords as described above over the land concerned. The units within the grant should be of a size reasonably suited to individual tenure, and mergence should not be permitted.

Among the functions of the "landlord" as defined above I have

placed the marketing of excess produce. This is admittedly an ambitious programme. I have placed marketing in that category for simplicity of exposition, for the earlier stages of that process are undoubtedly within his province. Clearly, however, contact is ultimately with the merchant and shipper, the agent who both exports and imports, and thus adjusts the trade balance. Again, it becomes a question of drawing a line between two agencies, and it is possible to draw this line nearer to, or further from, the source of production. It is this ill-defined border-line between the function of the "landlord" and of the merchant that appears to offer the most profitable field for the employment of external capital during the early stages of development. It should not be a matter of insuperable difficulty to extend the merchant's function to include temporarily that of the "landlord" by the grant of a concession which would remain attractive while strictly limiting the period and allowing for the automatic reversion of the "landlords'" rights as and when such a class arises. From this point of view it is merely shifting temporarily the border-line between "landlord" and merchant towards the source of production.

Development, therefore, may frequently best be effected by a body intermediate in character and somewhat difficult to classify, a body which will be complex with respect to the functions it fulfils. Especially is this likely to be the case where that body is established for the promotion of cotton-growing. In many of the areas cotton-growing on a systematic basis is new, and methods have to be inculcated. This educative function, as well as the control and organisation of a seed supply, are primarily the function of the State. The provision of the means of cultivation, the clearance of the land, and the bulking of the produce of individual growers are as clearly within the province of the "landlord." Yet all these may conveniently, in the first instance, be aggregated in the hands of concessionaires. A clear recognition of these functions, an equally clear separation of those appertaining to the State, from those appertaining to the "landlord," and of these, again, from those of the merchant, and a definite limitation of power in the case of those of the second class, will be necessary if progress from within is not to receive a check.

Lastly, there is one point which, though bearing indirectly only on the question of land tenure, is so pertinent and, if left unrecognised, might so easily wreck any scheme of development, that a reference must be made to it here. "The danger of going too fast with native races is even more likely to lead to disappointment, if not to disaster, than the danger of not going fast enough." Any extensive development of cotton-growing, if carried out on the above principles of partition of the value of the crop, will at present prices, result in pouring money into the country, and its

distribution among a class of growers without experience of the possession of excessive wealth. Ignorant of the means of saving or of the application of wealth to development, they will be a prey to every adventurous and unscrupulous trader, and the wealth that might have been used to such advantage will be dissipated without benefit to the people or country. Undoubtedly, if our proposals are to mature, these primitive peoples require to be protected from "going too fast" until such time as a "landlord" class arises which is capable of using these profits with advantage. The need of the State for funds pending the establishment of an economic rent has also been indicated, and these profits form a convenient source especially for the furtherance of profitable schemes of development. We have, therefore, to devise a scheme for directing these temporary profits into the hands of the State for application to such schemes. The simplest method of so doing would appear to be by the adoption of a sliding scale covering all prices of cotton. This scale would be so adjusted that at the lowest reasonable price the cultivator would receive sufficient to attract him to the cultivation of the crop, and the capitalist the expectation of a reasonable return on his investment for the risks involved. The profits from the receipt of any additional price will be divided in such a way that an appeal will be made to the very human instinct both of the cultivator and the investor for profit, but the share paid to each will not rise in full proportion to the rise of price. The exact terms of such a sliding scale are not a matter for discussion here. The principles have been laid down, and, if followed, will result in the diversion of a considerable portion of the profits arising from abnormal prices into the coffers of the State and in the speeding up of schemes of development without the ill effects that might otherwise arise, and without affecting the progress of material and moral development of the races affected.

SUMMARY.

I may summarise the conclusions to which these thoughts have led us. The trend of development in the tropical areas of Africa, and especially those that offer prospects of cotton growing, will be determined largely by the policy adopted with regard to the land, the foundations of which are laid at a very early stage. In these tracts, land now possesses little or no value, but will, in the near future, inevitably develop a value; the adoption of a land policy having an economic basis is, therefore, relatively simple, besides being, on theoretical grounds, desirable, more especially as such a policy is in general accord with native custom and appears best suited to achieve progressive material and moral development. The administrative requirements of such a policy, if it is to be

applied to the individual holding, are, however, considerable, and on these grounds there arises a need for an intermediate or "landlord" class. Further, the establishment of such a class is likely to be the means of building up, and organising, the capital requirements of this development.

Such an internal development must be slow in view of a general paucity of population and initial lack of capital. It will, in all probability, be too slow to meet the world's requirements for raw materials. Immediate development, consequently, will take place through the medium of external capital, which should be divorced from the Administration in respect of that portion which is applied to increasing the intrinsic value of the land. It is, however, the function of the Administration to determine the conditions under which such capital is admitted so that the slower development may proceed unchecked; and it should be possible to determine those conditions without undue restriction of capitalistic enterprise.

The economic problem raised in the above article is dealt with in some detail, as well as historically, in James Dundas White's *Land Value Policy*; the book is, however, addressed to the aspect of the problem as it appears in England. The whole question as it applies to Central Africa is discussed in much detail in Sir F. D. Lugard's *Dual Mandate*. The Indian landed system is described in Sir John Strachey's *India: Its Administration and Progress*. I have also dealt with the question in its Indian aspect in a simple manner in my *Foundations of Indian Agriculture*.

APPENDIX II

THE TREND OF AGRICULTURAL DEVELOPMENT IN THE UNITED PROVINCES

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It would be a commonplace to say that the factor dominating the agriculture of the United Provinces is the monsoon; the proposition is self-evident. When, however, an attempt is made to measure that dominance the problem is no easy one. Still more difficult is it to describe that measure of dominance in non-technical language. I shall make no such attempt; rather will I explain that technical language by a homely illustration.

If I throw a ball it can be said that the harder I throw the greater the distance the ball will go. There is here a direct relation between the strength I exert and the distance the ball travels, and the fact is expressed by what is termed the correlation coefficient, or r , which is here equal to $+1$. If, however, I throw with the same strength, but use a ball of different weight each time, as long as extremes are not included, the distance each ball travels will bear a direct relation to its weight, but the lightest ball will go furthest and the heaviest ball the least distance. Here distance is directly correlated with lack of weight, and inversely with actual weight. The fact is again expressed by the correlation coefficient, but with a change of sign and the equation becomes $r = -1$. If, again, I throw a ball against another man, turn for turn, the distance his ball travels is dependent only on the strength he exerts and no relation exists between the strength I exert each time and the distance his ball travels. Again this fact is expressible by the correlation coefficient, and is given by the expression $r = 0$. Lastly, if I throw a ball against a gusty wind, the distance travelled will depend not only on the strength used, but on the strength of the wind. The correlation coefficient between the strength I exert and the distance travelled in this case will be between 0 and $+1$, and the magnitude of r is an expression of the relative influence of the strength I exert and the wind. If the wind be light and fairly steady the value of r will be large and nearly 1, if it be strong and very gusty r will be small, approaching 0. It is not here necessary to enter into the technical method of calculating the value of r in any particular case; my

object is merely to indicate the meaning of, and the importance to be attached to, such a figure.

In the course of an investigation I have recently undertaken, details of which I hope to publish shortly, I have had reason to attempt the measure of the extent of the dependence of the agriculture of the Province on the monsoon, and I have used the correlation coefficient, as just described, as an indication of that measure. An instance or two will suffice to make the point I desire to bring out clear. For the relation between unirrigated wheat area and the previous monsoon r has been found to have a value of over $+0.8$, while, for the relation between the unirrigated cotton area and the early rainfall, r has been found to have as high a value as $+0.87$. These figures for r are high, and inasmuch as they give a definite measure of the relation between the monsoon and the area under these two crops, they indicate a very close dependence of the unirrigated cropped area on the monsoon rainfall.

The use of the correlation coefficient may be employed to carry the argument a further stage. In a particular instance the relation between the monsoon rainfall and the unirrigated wheat area is given by the value

$$r = +0.8115$$

For the same tract the relation between the monsoon rainfall and the total area is given by

$$r = +0.4575$$

while for the irrigated wheat area the relation is given by

$$r = +0.2115,$$

a figure which a further calculation of error, into which it is not possible to enter here, shows to be negligible.

The interpretation of these figures is clear: the introduction of irrigation removes the area of irrigated wheat from the sphere of dependence on monsoon rainfall.

It is only necessary to quote one further set of figures to establish the point I wish to emphasise, and to the establishment of which the entire previous remarks have been directed, namely, that the controlling factor in the agricultural development of the country is the supply of water for irrigation. During the last ten years the average total area irrigated from all sources has been 108 lakhs* of acres out of an average total of 347 lakhs of acres of cultivated land—a percentage of 31 only, and a percentage which the introduction of the Sarda canal will only raise to 34. Nor is this a true measure of the area unirrigated, for in years of drought it is the unirrigated area that is reduced, and the area of land uncultivated from this cause in such years is sufficient appreciably to swell the normal

* 1 lakh = 1,00,000,

cultivated area. The key to the problem of agricultural development is thus to be found in the water supply.

I have throughout the above argument limited my illustration to examples involving area for the reason that the statistics for areas of the crops of the Province are very accurate. Yield, however, is, to the holder of a definite amount of land at any rate, an even more important matter. Practical considerations make the determination of the relation between rainfall and yield a matter of some difficulty, for no accurate statistics of yield are available. The whole question is now under investigation. It would seem probable, however, that the conclusions arrived at in the case of area would hold with even greater force in the case of yield. The area sown to a particular crop is determined not only by the available land in a condition to be sown to that crop, but by the total of the individual opinions of the different cultivators as to what crop will pay them best. Once a crop is sown, and accepting a standard normal cultivation, the yield would appear to be determined almost entirely by climate. In the case of rains crops the climatic factor is clearly the monsoon, but in the case of the *rabi** this is not so obviously so. The winter rainfall will be a potential, and almost certainly the most important factor, but the extent of the dependence has still to be worked out.

Sufficient has been said to show the vital importance of the rainfall on the agriculture of the Province, an influence which is not controllable by man. This fact has only one practical interpretation, namely, that if agriculture is to be rendered less precarious and, consequently, to become the assured proposition which will attract the capital so urgently required, the prime need is for a controllable water supply. The possibilities of developing such a supply are, therefore, worthy of close consideration.

The approximate figures of the irrigated area are here given:—

Canals (Government and private)	22·5	lakhs	acres
Reservoirs	0·6	"	"
Wells	52·6	"	"
Other sources	22·5	"	"

and we may briefly consider these in turn.

The canals are mainly supplied from the rivers arising in the hills. Of these, the Jumna and the Ganges canals already use the total supply of water from these rivers, while the Sarda canal is now under construction. In the South, the streams arising in Central India irrigate an area of about 1·75 lakhs of acres.

The perennial rivers have thus been, or will shortly be, put to their fullest use, and any large extension in this direction cannot

* Rabi, the cold weather crops.

be looked for. A further feature of the older canals requires to be noticed, it is that these are still run on a protective basis. By this is meant that the available water is supplied to the commanded area with the important result that, owing to the prescriptive rights established thereby, in times of short supply restriction occurs in the direction of fewer runnings throughout the commanded area and not in the direction of a reduction of the area to which a full supply is given. Necessary though this policy is, it has its disadvantages for, though it means the largest benefit to the community as a whole, it also means reduced yield to the individual who, therefore, suffers under a sense of grievance. The important point that I desire to emphasise here, however, is that, even in the canal tract, there is ample scope for an additional supply.

Reservoirs are of little importance, except in the tracts South of the Jumna. They are confined to the southern districts where the undulating country makes the construction of *bundhs* (embankments) a practical proposition. They may be provided with an outlet and irrigate land lower down the valley, or the water may be let away and the bed ploughed and sown.

Wells are, and will, even after the construction of the Sarda canal, remain the major source of a controlled water supply throughout the Gangetic alluvium and the Doab, south of the Jumna the ground water supply is precarious.

Other sources of supply include *jheels* (natural lakes or swamps) and tanks. These are chiefly used in the East of the Province, in which some 14·7 lakhs of the 22·5 lakhs of acres so irrigated occur. This is not an expanding supply; rather is it a diminishing one. Pressure of population is leading to the reclamation, by means of drainage schemes, of the *jheels* for cultivation—a development which is likely to be stimulated further by the progressive import-ance attached to questions of health.

The point that stands out as the result of this brief survey is that there is relatively little more development of irrigation from the superficial water supply of the Province. There remains only the subterranean supply from which further supplies can be drawn. This, fortunately for the Province, is unlimited throughout the major portion of the alluvial area lying between the Hills and the Jumna-Ganges line and the question of agricultural development, being as it is in the first instance a question of an assured water supply, is, therefore, primarily one of the development of wells.

To explain my next point I will turn from the Province as a whole to tracts without irrigation by any canal, and in which, therefore, all irrigation is from wells or other sources, the essential feature of which is that the water has to be lifted. The following figures are for the year 1921-22, a year of good rainfall in which the *jheels* and tanks were full and the water level relatively high, a year,

therefore in which the labour of irrigation was at a minimum. They illustrate the point.

	Nett total cropped area	Well irrigated	Irrigated from other sources	Per cent. irrigated
Budaon	934,463	47,259	20,178	7.2
Fyzabad	706,413	222,040	140,748	52.7
Gorakhpur	2,109,490	449,801	374,861	39.1
Jaunpur	642,245	316,961	35,553	54.9
All non-canal tracts	17,425,855	5,523,373		31.7

	Rabi cropped area	Rabi irrigated all sources	Per cent. original
Budaon	563,084	54,105	9.6
Fyzabad	449,678	331,919	73.8
Gorakhpur	1,258,420	740,207	58.8
Jaunpur	366,660	317,383	86.6
All non-canal tracts	10,394,186	4,990,300	48.0

The percentage in Jaunpur is high, but it is exceptional, and the average indicates that less than a third of the total, and one-half of the *rabi*, area is irrigated. While, therefore, considerable diversity of practice exists, the percentage of area irrigated from other sources than canals is low, and this is the case even for the *rabi* when it would be reasonable to suppose efforts to use all available means of supply would be made. There can be little doubt that the argument holds for all tracts, and it is for simplicity's sake only that I have confined myself to the non-canal tracts. There is clearly some influence at work which limits the area irrigated by such means, and it is clearly essential that this influence should be identified if the problem of development is to be solved.

I think it may be accepted as unquestionable that the cultivator will irrigate to make up a deficiency of water if he can possibly do so. Accepting also the fact, which the relation that I have shown to hold between the crop and the rain must indicate, that water is the controlling influence in agriculture, it follows that the percentage of irrigated land to unirrigated is a rough indication of the difficulty experienced in raising water. Thus, the difference between Mirzapur, with 7.8 per cent. only of its cultivated area irrigated by wells and "other sources," and Benares, with 57.5 per cent. so irrigated, is clearly due to the difference of the difficulties in well construction in the two districts. This will certainly hold for neighbouring tracts, though the decrease in percentage irrigated area which accompanies the gradual passage to sub-montane conditions probably means a less dependence on water artificially

supplied. This fact in conjunction with the fact that, even in the tracts most favourable for irrigation, a large area is not irrigated, has only one interpretation—the cultivator has not the capacity to lift more water than he does. From wells, which supply more than half the irrigated area, from “other sources,” which supply nearly another quarter, and from canals too, to a certain extent, water can only be obtained by lift—that is, by labour or work. I know of no figures to show the relation between water lifted by hand and by bullock power, but undoubtedly this combined power is limited and insufficient. Agricultural development, in the Jumna-Gangetic alluvium at any rate, works back, therefore, primarily to a question of the provision of power to lift water; the water is there but the power to make it effective is not.

The three types of power are hand, bullock and mechanical. The facts given speak for themselves; hand and bullock power are not sufficient, or there would now be little land left unirrigated. The question at once arises whether it is not possible to increase these sources of power. I think both forms of power can be dealt with in one, for they have this in common that they both arise from live beings which require the use of the produce of the land for their sustenance. At the present time a condition of stability is reached which any variation arising therefrom shows to be a vicious circle—it is impossible to develop larger food supplies without more power; and more power cannot be developed without larger food supplies. It is possible that the fact that there is an exportable surplus, and that other than food and fodder crops are grown may be considered to refute this argument, but I think not. Man does not live by bread alone, and his other needs can only be provided by exchange for wealth produced over and above that which will directly satisfy his own essential needs. I, at any rate, feel myself compelled to the conclusion that we must turn to the third source of power if we are to break the circle, but it is a conclusion which carries with it certain inevitable corollaries which we must now consider.

Directly we pass to mechanical power the whole economy of the affected area is changed and the chief feature of the change is a passage to a strictly cash basis. Man power is to a small extent, only when labour is hired, on a cash basis. For bullock power a capital provision in cash is necessary, but the “running charges,” if I may so term them, are not in practice a cash charge unless the bullocks are employed on hire. In the cases of mechanical power both capital and running charges are strictly interpreted in cash. Capital, therefore, is essential if mechanical power is to be employed.

Another and, I think, equally definite, feature of mechanical power is that it is more expensive. This, I am inclined to think, would hold good even against the cash equivalent of the personal service of man and bullock, were such an equivalent practically

obtainable, which it is not. Certainly it is more expensive when cash is weighed against personal service. For mechanical power to be effective, therefore, two conditions are essential; the water so raised must not be wasted which, practically interpreted, means the provision of impervious distribution channels, and it must be used to the fullest advantage, the practical interpretation of which is that the most valuable crops must be grown. A corollary of the former, the necessity of *pukka** channels, seems to indicate the desirability of reducing within limits the size of the plant and of increasing the number.

We have, therefore, three conditions which seem to me essential if pumping by mechanical power is to develop; the provision of capital, the establishment of small units and the growth of valuable crops. The development of agriculture will depend on the satisfaction of these three, of which the first is fundamental; it may not be possible to develop power pumping as a successful financial venture without the last two, but it will be impossible to develop it at all without the first.

The development of a commercial transaction, as must be any development on a strictly cash basis, as I have shown this to be, is dependent on the probable interest to be derived from the invested capital. What, then, are the sources of such capital; and whence can capital be attracted? I can conceive the following:—

Government. But clearly Government cannot intervene here; the overhead charges for an inspecting staff of such widely scattered installations places this out of the question, although Government has the great advantage of an organisation by which charges could be realised.

Private commercial agency. Still less is this possible. Not only are the overhead charges for inspection and maintenance the same as for Government, but the only method open for realising overdue payments is through the courts.

The cultivator himself. Here the individual cultivator has neither the initiative to use nor the capital to invest; usually also he has no sufficient area at his command. It is true that capital might be available on a co-operative basis, but a pumping plant is localised and co-operation between those owning a compact area would be required. Co-operation has not taken root to this extent. It is doubtful whether co-operation would effect this even in a country where co-operative development has been considerable and where the condition of land tenure—I refer to small and divided holdings—is similar to that of this country, as in the case in Belgium. The further essential, the growth of valuable crops, appears to me to rule out this possibility. Co-operation must in that case extend, not only to the erection of the plant and the distribution of the

* *pukka*; well made, here brick or concrete.

water, but to the handling of the crop. I am afraid we must seek the initiative elsewhere.

The zamindar. Here if any where, is to be found the agency by and through which the development can take place. I have been unable to trace any figures showing what percentage of the land is held as *zamindari* in sufficiently large blocks, but it is undoubtedly large. The zamindar has capital, or the security necessary to raise it. He has also sufficient area. He can, and he will, effect the development, and he can make a handsome return on his capital. Let me describe the essential features of the development from the zamindar's point of view.

We are considering a commercial proposition which involves, as I have stated, an attractive return on the capital invested, that is, on the capital sunk in the plant and distributing channels. Suppose now he installs such a plant capable of protecting some 300 acres. He will retain an area, say of 100 acres, in his own possession and on this he grows the valuable crop, potatoes, tobacco or cane, the latter I take for example, which is to pay the bulk of the return on his capital. On this he will at the start grown some 10 acres of cane and he erects a *bel* (indigenous installation) for the conversion of juice into *gur* or *rab* (forms of crude sugar). The main differences between mechanical power and bullock power are that the former may be continuous while the latter must be intermittent, and that the running charges are, in the former case, proportional to the use and continuous in the latter. Hence the longer the power plant is in use the greater will be the return. He will, therefore, find use for his plant when not required for pumping; he will use it to crush his cane, and he can, with additional machinery, use it for threshing his wheat or even for extracting oil. The power plant must, therefore, be selected with discretion and be adapted to undertake these additional duties efficiently. Outside the area under his direct control he will be in a position to supply water and will reap the advantage of the higher rents which a guaranteed water supply commands. These are the results arising directly out of a power plant, and there is little doubt that the financial return will be sufficient to make the proposition an attractive one provided the plant be well selected and provided the valuable crop be grown. Where such installations have failed it is usually directly traceable to the neglect of one or other of these provisos; the plant cannot pay if it is used merely to provide water on payment for the growth of the standard crops of the Province. The Shahjahanpur farm, on a capital of Rs. 85,000, last season made a profit of Rs. 6,700. When it is remembered that this is a research farm which carried abnormal overhead charges, and on which not immediately productive expenditure is incurred, and when it is remembered that it cannot use its power

equipment to the full capacity because it cannot undertake subsidiary and purely commercial work as oil crushing, the possibilities of the development proposed stand out even when judged merely as a financial proposition, and when the gain to the community of an increased average production is ignored.

This, however, is the crudely commercial aspect of the question; the potentialities do not end there. The home farm will be in the nature of a demonstration farm and the progressive zamindar will proceed to erect a second *bel*, to supply which he will assist the tenants whose land is commanded by the irrigation system to grow cane for him; he will finance them and organise the supply of manure required for the crop. It is here that the fullest potentialities of the system become apparent. The direct, as well as the indirect, effect of introducing cane of improved types such as can be readily grown on a controlled water supply is again well illustrated on the Shahjahanpur farm. The effect is not limited to the cane crop, but wheat grown subsequently, and again I only take wheat as an illustration, has yielded an average of over 30 maunds* per acre. The inducement, once he appreciates the fact, should stimulate the tenant to seek to grow cane on terms which will yield a handsome profit both to himself and the zamindar, while developing at the same time the material prosperity of the country, for the cultivator's profit will lie very largely in the subsequent crop.

We have here one of the most powerful potential influences for agricultural development. Improvements that have been made since the institution of the Agricultural Department have been many, but full benefit has not been derived from a large number of them because they are based on a low standard of cultivation due, in its turn, to a deficient water supply. I may illustrate my meaning by one practical example. The introduction of Pusa wheats has doubtless been a source of considerable profit to the country, but the full benefit has not been developed. With a standard of cultivation capable of giving 30 maunds of wheat to the acre, the wheats commonly grown would fail. Many of them would fail because their weak straw prevents that weight of grain being carried. The richest irrigated wheat tracts only average some 17 maunds grain per acre and, except near cities, the cane grown is of the *Ukh†* variety, which alone is capable of surviving on the existing available water supply. Increase that supply and make it assured, and a vastly improved standard of cultivation is at once possible. It is here that the key to agricultural development is to be found.

I have dealt so far with the material aspect of the question but there is another and less material one. I have always regarded

* Maund = 82 lbs. approx. † Thin canes.

the economic organisation of the rural tracts as deficient because it leaves to one important section of the rural community, the zamindar, a passive rôle. The distribution of functions is uneven, and no organisation possessing that feature can be sound. The development outlined remedies that defect. It weaves the zamindar more effectively into the rural organism of which he becomes an active member. A relation of co-partnership arises between the zamindar and the tenant to the great advantage of both. I visualise the ideal development as that which builds up a number of home farms, if not personally supervised by the zamindar himself, at least in the hands of an interested agent—interested in the sense that he is paid by results. The importance of this aspect cannot be overestimated. The metayer system of France is a development on these lines, and its fundamental condition is commonly supposed to be the division of produce between landlord and tenant on a system similar to *batai*. That may be the essential characteristic, but it is emphatically not the essence of its success. In Italy metayage is not popular, just as *batai*, with all its derivatives, is not popular in this country. No, the measure of its success is determined by the extent to which the landlord takes a personal interest, and the extent to which he recognises the community of the interests of himself and tenant. This is the essence. A well-known *taluqdar* recently remarked to me that he found no interest in watching the bullocks go round on the threshing floor in the customary manner of centuries. That disability is here removed. In the home farm of sufficient size efficiently to employ up-to-date methods, in the collateral development of sugar cane manufacture, oil-crushing and so on, and in the organisation of the sale of produce; surely in all these there is enough to supply the needs of those most active of mind and body.

That is the ideal, and is it not an ideal worth striving for? I myself think so. But I am not sufficient of a visionary to imagine that so drastic a change can be readily brought about; to imagine that the seventy thousand odd installations necessary to irrigate the present unirrigated area will ever materialise. The practical difficulties in the way, such as the question of land tenure, are too great. But I am sufficient of a visionary to believe that gradual development on these lines is possible and to an extent sufficient materially to alter the standard of agriculture of the Province, and I incline to believe it to be the only evolutionary means.

APPENDIX III

MATERIALS FOR A POLICY OF AGRICULTURAL EDUCATION

*Reprinted from THE AGRICULTURAL JOURNAL OF INDIA,
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Myself when young did eagerly frequent
Doctor and Saint and heard great Argument
About it and about: but evermore
Came out by the same Door as in I went.

IN perusing the voluminous literature which has arisen on subjects educational, the quotation which heads this paper comes somewhat forcibly to the mind. I am not oblivious to the retort that this statement obviously raises, namely, why then add to that volume? I have failed to find an answer which satisfies myself, and am fain to admit that it is probably of the same tenor as that to the riddle of our childhood—the riddle I do not remember, but the answer was to the effect that the other donkey did so too. There are certain thoughts, however—perhaps more suitably termed criticisms—which so constantly arise in such perusals that I am tempted to assume the rôle of the other donkey and commence with a few general observations which will lead on to the more special subject of agricultural education.

In all educational institutions we have two factors—the pupil and the teacher; the former, owing to the system of teaching in classes, a multiple, the latter a single, intelligence. The condition too often offers the mental equivalent of a boat's crew. In training a crew for a race the coach has to think of the crew as a whole and attempt to raise the average physical fitness to the highest point on the day of the race. For this purpose certain members will be overtrained or "stale," others under-trained. The system of training, consisting as it does, or did in my own college days, of combined exercise in the boat, and individual exercise, known technically as swinging, affords a certain amount of latitude in adapting this system to the individual capacities of the oarsmen. Add to this the fact that the rowing age is an age of discretion where the oarsman is capable of interpreting his own feelings and expressing them to the coach, and it becomes clear that the training for a race is a system interpreted by a coach, or teacher, who is aided and checked by the intelligences of the individual members of his crew. The similarity of the conditions of the teacher with

his class, to those of the coach with his crew, is sufficiently near to mask the essential and great differences, and this similarity is emphasised by the examination system which fixes a culminating point for the education. For, just as the crew is judged by the result of the race, and as the coach attempts to have his crew in the pink of condition on the day the race is rowed, so the teacher attempts to have his class so mentally equipped on the day of the examination that it will show the best advantage. To do this he, too, adopts a system and, to the extent that the class system by which the pupils are distributed to him, and the examination system by which he and his pupils are judged become standardised, that system also becomes standardised and impersonal.

The force of the comparison, however, lies not so much in the points of similarity as in the differences, and this aspect will repay a brief consideration. The crew is judged by its combined effort which is the resultant of the individual efficiencies of the members of the crew. In the case of the examination, on the other hand, there is no combined effort—the individual efficiencies are not interdependent—and the teacher will be judged differently according as major stress is laid on the average number of passes or on the standard attained by the most intelligent pupils. This difference may be expressed in another way. While the judge at the winning post of the boat race has no personal influence on the result of the race and, through it, on the coach and the system of training, the judge in the examination, in other words, the examiner, according as he frames his questions and considers the answers to test the general standard of the class or to pick out the best pupils, will have a material influence on the teacher and his system of teaching. Of the former type, the examinations, as conducted in this country are perhaps the most typical examples, while of the latter, the scholarship examinations, as conducted at the older English universities, afford a good illustration. The former appears to be the sounder in that it will aim at the maintenance of an average standard of the combined teaching, within the understanding of all the students, about which individual exercises, adapted to the individual intelligences, can be built. The latter type of examination forces the standard of the combined teaching to the level of the highest intelligence—too far above the level of the weaker intellects for any system of individual exercise to be of value.

Again, I have stated that members of the crew have reached an age of discretion. They are in a position to judge by their feelings their physical fitness; they can convey those feelings to the coach who can modify the individual training accordingly. The pupil is in no such enviable position. He is not a judge of his own mental condition and the teacher is thus to this extent at a disadvantage, when compared with the coach, that he has to

interpret his instruction in terms, not of his own intelligence, but of that of his pupils. This, to my mind, is a point rarely realised, and realised with the utmost difficulty. Again and again I have listened to reasoned and logical arguments on courses of instruction, the reason and logic of which, however, appeals to the adult mind, and I have found it impossible to avoid wondering, as I listened, whether the speaker had not assumed in his pupils a mind as logical and as accustomed to reasoning as his own. The danger is, in fact, very real that, in evolving a system which is reasoned and logical, the teacher is evolving one which, by that very fact that it is reasoned and logical, will appeal to the adult, and not the pupil, mind. He has in fact failed in one of the main functions of a teacher, and he lacks the capacity of projecting himself into the position of the pupil.

There is yet a third difference in the comparison I have drawn. The coach's efforts are concentrated on the race, and on turning out his crew on the day in a condition as near physical perfection as possible. It is no concern of his if, on the evening after the race, the stroke dines not wisely but too well, and is later arrested for obstructing the police; nor does he care if another member of the crew spends the rest of the day smoking till he becomes ill. The teacher is in a totally different position with his pupil. He does not, or should not, lose interest in his pupil on the day the examination result is published, though this is perhaps too frequently the case. A teacher who does this is not worthy of the post, and it is only necessary to consider one of the objects of education, and that is, to render the individual a useful citizen, to make this clear. Education has missed one of its main functions if it will not prevent the man who successfully passes the final examination from developing into a pickpocket.

By the above comparison I have attempted to bring into prominence one aspect of the educational problem, and one which is frequently overlooked, namely, the insignificance of the system compared with the individual. My statement that this aspect is overlooked may be called in question, and it is true that recognition is frequently accorded to the point. I cannot help thinking, on the other hand, that in this country, as in others, in the distribution of educational finance and in the grants lavished by Government for educational development, which are largely earmarked as non-recurring and are devoted to the erection of new school buildings, too much attention is given to the numbers of schools teaching a standard curriculum, and too little to that improvement of the pay and prospects of the teachers which alone will attract a better class to the profession and thus remove the necessity for that rigid standardisation which stultifies the individual initiative—so essential to real education—of the teacher.

The above considerations are of general application; that is, they apply to the educational problems of any country, but from this point my argument proceeds along two lines, and deals more particularly with the problem as it appears in this country. The first of these deals with the type of education as influenced by the conditions of the country, the second with the limitations imposed by the system of educational finance.

One of the functions of education has been already stated, namely, to render the individual a useful citizen. That may be a highly materialistic aspect, but the modern world is materialistic, and a country, if it is not to be left behind in the international race, must be materialistic. It is difficult, if not impossible, to find a brief definition which will cover each and every function of education, and the above will, perhaps, serve as well as any for a starting-point. Now it is obvious that the world would not be a satisfactory place to live in if everyone were educated to the clerical profession. The clerk is a useful person, but once the number exceeds that necessary to carry on the essential clerical work, there must be a number of persons who are failing to fulfil that function. It may be that there is here a confusion between education and training, but I think not, though I admit the line of demarcation between the two is not readily drawn. Education then, considered from a national aspect, must be diverse, and, in its practical aspect, consists in placing before the youth of the country the essentials for the development of the mind in a form which will leave the individual in a condition in which he will render useful service as a citizen. In former times the guiding factor in the choice of a profession was mainly parentage, the son following the trade of the father, and this is still very largely the case, especially in more backward countries. But modern thought—the result of compulsory education—is increasingly in favour of equality of chance, irrespective of birth. Within wide limits, therefore, the diversity of education should be so disposed as to place within reach of each individual a form of education suited to his probable future life. A more detailed consideration of the true meaning of this statement is desirable, since it is here, I think, that the fallacy contained in the modern claim for equality of chance, and in the various economic doctrines arising therefrom, is most readily exposed.

In the various professions by which the individual earns a livelihood, the labour expended is rewarded in very different measure in the apportionment of worldly goods, and, with the materialistic aspect of modern life, the professions tend to be judged by this standard and to be desirable in proportion to the measure of these goods received. Equality of chance in practice, therefore, implies a claim on the part of every individual to an

education fitting him for the most lucrative profession. Now it is perfectly clear that the world would not be a fit place to live in if every individual were educated for the legal profession. Food and the thousand necessities of modern life have to be produced by human labour, and for that labour the education I have taken, as example, is unsuited. Equality of chance, therefore, is not obtainable by the provision of an education qualifying for the most lucrative fields of employment. The alternative, the equalising of the reward, while perhaps not theoretically unsound, is practically unattainable. It is only necessary to attempt to picture the economic condition of a country in which the farm labourer receives say, Rs. 1,000 per mensem,* to understand how far we are from obtaining equality of chance by this means. The fact is, such equality is an ideal, probably undesirable and, certainly, practically unobtainable. Labour of the brain always has been, and will continue to be, more liberally rewarded than labour of the hands, though change may occur in the degree of divergence. Equality of chance is thus a fallacy; nevertheless the idea has an underlying basis of truth. That truth is, I think, this: While for the majority it is desirable that an education shall be provided which will fit them to fill the station they are most likely to occupy in life, namely, that into which they are born, modern thought demands, and rightly demands, that the individual should not be bound by the accident of birth. Far from this meaning that each individual has a claim to the highest form of education, it implies that a ladder should exist by which individuals in any particular station can ascend, if so fitted, to a higher one. Advancement is, thus, not an inherent right, but the reward of merit. One error running through educational discussions and educational schemes is the misplacement of these two objects of education—the conversion of the ladder provided for the gifted to a broad staircase for the mediocre. The effect of this error is to be seen in most countries, but in none perhaps more so than in this. The average individual is led to expect, regardless of economic laws, an education fitting him for a station into which he was not born, and in after life a remunerative field in that station. The inevitable result is disillusion and discontent, the source of half the social unrest in this and most advancing countries.

I think we have now reached a stage in the argument which will enable us to provide a truer view of educational aim. It is that the main and major educational object should be to provide an education which will leave the individual a useful citizen in the sphere in which he was born. The educational ideal contained in

* The same condition will be reached by assuming the High Court Judge to be paid Rs. 7 per mensem, the essential fact being the relation between cost of production and purchasing capacity—that is, relative, and not absolute, values.

the above is to inculcate in each individual that habit which is briefly and succinctly given in the catechismal saying, "to learn and labour truly to get my own living, and to do my duty in that stage of life into which it shall please God to call me."* It may be argued that that attitude is incompatible with ambition, the desire to ascend, but I think not. That desire may exist alongside the ready acceptance of the fact of failure. But while I insist that this ideal should form the main object of educational policy, I am equally certain that that object will only be completed by the provision of what has been termed a ladder, but a ladder so hedged about that only those suitably equipped may ascend.

If the arguments adduced be sound, it follows that in any country the type of education most commonly found should be adapted to fit individuals for the occupation most commonly practised, and it is only necessary to glance at the figures to appreciate how far education in this country is from the ideal I have outlined.

In the United Provinces "two-thirds of the population are supported by agriculture, and there is no single occupation which supports one-tenth of this number of people." In actual figures these are divisible into the following main classes:—

Zamindars, non-cultivating	..	..	..	500,000
" cultivating	..	..	..	3,000,000
Tenants with some occupancy rights	..	..	..	10,500,000
" " no occupancy right	..	..	..	10,250,000
Sub-tenants	..	..	..	2,000,000
Labourers	..	..	..	4,500,000
Total	..	..	..	30,750,000

While the latter two roughly constitute a class whose standard of living is such that the children have to begin to take a share in the family labours at a very early age, and for whom, therefore, the simplest primary education is all that can be provided, a very large proportion of the remainder occupy a position, such that the children are not compelled to earn a livelihood till the age of 17 or even later, and for whom it is desirable, both on

*"To do your work honestly, to die when your time comes, and go hence with as clean a breast as may be—may these be all yours and ours by God's will. Let us be content with out status telling the truth, as far as may be, filling not a very lofty but a manly and honourable part."

In turning over the pages of Thackeray's *Essays and Reviews* during an idle half hour I have, since this article went to the press, chanced to light on the passage above quoted. It is one which would be hard to equal as a definition of the educational ideal.

individual and communistic grounds, to provide an education fulfilling the conditions I have laid down. I have said on individual and communistic grounds—individual, because the world's progress is affecting agriculture equally with other occupations, and that man will succeed best who most clearly appreciates this progress and most quickly profits by new markets opened to him; communistic, because sound development of a community is only obtained by equality in the rate of educational progress of its several component parts, the unsoundest form of development being that where a small minority progresses while the bulk of the population stagnates.

There is thus a large community, probably larger than any other single community of the province, in a position to benefit by a suitable form of agricultural education. This state may be compared with the educational facilities provided, and in doing so care must be taken to distinguish between teaching agriculture, and education, fitting the student to return to the land. The point need hardly be laboured; the literary nature of the mass of the secondary education, unfitting the student for practical work of any nature; the location of the schools in urban surroundings, accustoming the student to a social life he cannot obtain at his home and replacing the healthy out-door life of the individual by the artificial sports of the play-ground—of which, though a true admirer, I recognise the limitations which include a dependence on companions for the supply of his physical recreations—are too well known to require further development. It is true attempts have been made to introduce agriculture into the school curriculum. These, however, come to grief from failure to distinguish between teaching agriculture and supplying an education suiting the pupil to return to the land. It is not realised that the student truly from an agricultural stock knows a great deal about practical agriculture, usually a good deal more than the master provided under such conditions to teach it, and such attempts as have been made hitherto to rectify the educational deficiencies indicated have failed from this cause.

On the first line of my argument, therefore, we have arrived at the conclusion that the present educational system totally fails to satisfy the needs of the largest single element, if not the major portion, of the community. It is true there is an agricultural college, but that is a coping-stone without the underlying structure. Moreover, the position of a college will be more clearly understood when the second line of argument has been developed.

Educational effort, like every form of endeavour, is limited by financial considerations. The necessary funds are obtained in a variety of ways. In many cases, as in the older universities and public schools of England, the funds arise from endowments, a system well illustrated by the munificent gifts which have been

made for education in the United States. In others, of which the primary educational institutions of England and a large proportion of those of this country are examples, the funds are provided by Government. In the former case the trustees are the sole arbiters in any question as to the disposal of the available funds, and the primary consideration is the degree to which the founders' terms are complied with. In these cases, there is no question of a financial return, the trust is complete with the fulfilment of the conditions imposed. Where, however, the funds are provided by Government the position is different. Government is merely in the position of trustee for the country, and it is its duty to see that the country receives the fullest measure of return for the expenditure involved. It is no part of my argument to justify the expenditure of public funds on education, that is generally admitted; my concern is with the measure of the return received, with relative rather than with absolute, values. There can be little doubt of the relative value of the two classes of education; that which on the average fits a man for full development in that station in which he lives and has his being, and that which compels him to seek, among fresh fields and pastures new to him, his means of livelihood. The former is a process of gradual evolution of the individual, which allows for development owing to the gradual interaction between the individual and his surroundings; the latter partakes of the nature of thrusting hot glass into cold water, a process ending usually in the destruction of the glass vessel.

The true error in the educational system of this country, as I conceive it, lies in the fact that it has hitherto developed along lines which render it unsuited for the largest single element, if not for the major portion of the population. This is no complaint that the educational facilities are excessive, but it is a very definite statement that the fullest measure is not being obtained for the funds expended. This is not merely based on negative considerations implying merely a waste of funds, such would be the case if the schools and colleges were filled by the sons of the clerical and learned professions; it implies more than this, the expenditure of funds in directions actively harmful; for, by failing to provide an education fitting the son of the landholder to remain on the land, the system drives such persons into a line of life for which they are unfitted, and in entering which they become as the hot glass to cold water. What is needed, and urgently needed, is the development of a form of education which will leave the average country youth fitted for life in the surroundings in which he is born; there is ample scope in such surroundings for the educated mind to find full and useful employment and to fulfil the rôle of a useful citizen which we have laid down to be one of the main functions of education.

It is open to argument that I am here labouring to prove a point, the importance of which is already sufficiently recognised. In part that is true; the recent conferences on agricultural education, the first held two years ago at Pusa, and the second last year at Simla, indicate this. The "memorandum showing what has been, or is being, done to impart agricultural education to the sons of cultivators," published in connection with the report of the last conference, however, shows what a relatively small amount of effort has been devoted to this aspect of education. Nor is my main object to supply this proof. I am tempted to think the difficulty has lain not so much in the recognition of the fact as in the recognition of what constitutes a suitable form of education. The arguments I have hitherto adduced may incidentally prove this point, but that proof is only incidental. Their main advantage lies in the fact that they provide a point of view which will, I think, help to point a way to a solution of some at least of the practical difficulties involved.

I have tried to show that, at least where the funds are provided from public sources, there is a very definite financial limitation to the method of disposal. This will become clearer on considering a concrete case. The Cawnpore Agricultural College has a four years' diploma course limited to 25 students per year, or a total of 100 students in residence. The college budget is Rs. 43,600, but this is clearly an under-charge, as it excludes all charges on the botanical and chemical sides, which are budgetted jointly with research, and it is merely the recurring charge without allowance for interest on capital charges or depreciation on building accounts. It is probable a figure of three-fourths of a lakh is not an over-estimate—that is, a cost of Rs. 750* per annum per student. The question is, under what circumstances is the expenditure of this sum of public money justified? It is always difficult to argue with any degree of conviction as to the justification of expenditure where the return is, as in this case, indirect. The subject is, therefore, best approached from a different aspect, and there are two such. The first is to discover the circumstances under which that return will be a maximum, and the second to consider the class of applicant now seeking admission.

The justification of the Agricultural Department must be found, in like manner, in the improvement of the economic conditions of the country, and no doubt the expenditure on the college is justified to some extent by the necessity of training members for that department. That, however, is a minor matter, two only, out of the 25 students annually admitted, being admitted to the service. Were that the only object of the college, it would appear

* Rs. 1 = 18 6d.

possible to find a more economical method of recruitment. The truth is that the ultimate justification must be found in the future career of the 23 remaining students.

Now, considered in a relative aspect, it cannot be doubted that a single zamindar, possessor of several villages, who takes a personal interest in his estate and who is progressive, by reason of a liberal education such as the college is now in a position to give, is potentially a far greater asset to the country than the small zamindar or tenant cultivating a few *bighas*. In the former case the gain is not limited to the actual money value of the better crops produced, and of the extra gain due to better business methods, great though this may be. His property forms a practical demonstration which must have some influence on the surrounding countryside, and he himself becomes an unpaid propagandist of new methods. The latter, on the contrary, can do little more than grow better and more valuable crops, and he possesses little of that which we may briefly sum up as influence. The college will be filling its function to the full, therefore, only when the main source of recruitment is the zamindar class—a class relatively small, perhaps, but numerically large and potentially powerful. It can hardly be doubted that a college with students so recruited would be in a position to do more to improve agriculture and the economic conditions of the countryside, on which that improvement so largely depends, than one with students recruited from any other source. It is the condition in which the college will most fully justify its existence.

That, at least, is the aim I have set before myself since I have been in charge of the college at Cawnpore. It is, for many reasons, an aim not immediately realisable. The larger landholders are mostly non-resident and have more immediate interests. The smaller ones are shy and frequently insufficiently educated. For the present it is sufficient if a few only of this class come, and it is a hopeful sign that this is the case.

The majority of applicants at the present time are, nevertheless, men merely seeking Government appointment intermixed with true agriculturists, petty zamindars or tenants. Frequently the application is accompanied by an appeal for a stipend. With the former I have no concern, they are not the type of student for whom there is any opening. The latter, however, form the class to which the department looks for its recruits, and the admission of a few is justified on this ground. The claim for a stipend is a different matter and as it is here that the financial aspect receives its clearest demonstration a short digression will not be amiss.

To any one who has had to deal with the selection of students for admission to a college the frequency with which poverty, as a ground for admission accompanied by financial assistance is

advanced will be well known. The fallacy of such a claim has, as far as I am aware, never been shown up; it is certainly not generally recognised. What applies for one applies to all. Were poverty to constitute in one case a claim to admission to a college with a stipend, every youth of suitable age would be justified in demanding this concession, and the collegiate education would become the standard the State is called upon to provide. The cost, placed at Rs. 750 per annum in the case of the college, to the State is clearly prohibitive, and those persons who advance such a claim forget that the money to provide the education and stipends ultimately comes from their own pockets. The fact is that stipends are only justified in cases where poverty appears as a check to an ability, to the possessor of which a college course will open a useful and profitable career.

I have now attempted to define, by reference to the Cawnpore College, the legitimate function of such an institution. That function is, to a certain extent, based on local conditions, and is not, therefore, necessarily identical with that of other colleges. The same financial consideration, however, underlies all, and the college aspect can never do more than touch on the fringe of the problem, reaching as it does only the numerically smallest class of persons connected with the land. If the true function is performed, however, the college will be the means of providing in the departmental district officers and in the progressive zemindar, two agencies of effective agricultural development. The speed of introduction of improved methods is, however, a reciprocal process dependent not only on the skill and energy of the instructor, but on the receptivity of the instructed. While, therefore, the college is providing for the former, the latter is in no way provided for. The form of education provided is too expensive for the mass, it is moreover collegiate.* What is here required is a cheap form of secondary education, complete in itself and complete within the limits provided by the age at which the average boy leaves school. In the United Provinces the sole attempt hitherto to provide an education of this type is in the vernacular two years' course of the college. The institution of this course and its location at the college is admittedly a temporary arrangement, and the course suffers from many disadvantages. In the first place, the age of admission is too high for a true secondary school, being the same as for the four years' diploma or collegiate course. Secondly, in addition to supplying a course of instruction suited for the class which we are now considering, it attempts to meet the needs of the members of that class which I have shown the college should attract, but who possess insufficient knowledge of English to take that course,

* Or should be. Owing to the weakness of the secondary education, the teaching has to make up the deficiency and is largely secondary in character.

two aims which are incompatible. While, therefore, the course has not been without its uses, it fails in several directions to meet the needs of the situation. In other provinces greatest progress in attempts to solve the problem has perhaps been made in the Bombay Presidency, where several vernacular agricultural schools are in existence. The cost of each pupil is stated to be Rs. 180 per annum, grounds which alone would place it beyond consideration for universal adoption.* The main problem, the provision of schools supplying an education fitted to the needs of the mass of the agricultural population and at a cost which makes possible their establishment in numbers sufficient for the accommodation of the available pupils, still awaits solution.

The primary object of such schools will be to raise the receptivity of the younger generation of agriculturists, and the method of attainment must be through education under conditions which retain the association with the land. This is a very different proposition to the provision of vocational schools, of which the main function is to impart technical skill. In the latter, technical instruction is the primary consideration, and theory is only taught in so far as it bears on the particular trade. In the former, it is true, subjects bearing on the vocation may, and do, form part of the course, but the centre of gravity of the instruction is shifted. These subjects are taught for their internal value as a means of education, and the practical application is left to be drawn by a process of natural imbibition in the daily life. It is here, as I think, that the efforts which have been made to introduce agriculture into the existing schools have failed.

Let us consider for a moment how an agricultural school of this type would be organised. The courses of instruction are to be educational, and the students are to be introduced to an appreciation of a standard of country life, something superior to the ordinary village life they have known, by a process of familiarity. Although, therefore, not directly a part of the education, the conditions and their arrangement will form as, if not a more, important section of the school organization than the purely educational section, in that they will form an essential of all such institutions, while modification to suit the different grades of schools will be made in the educational courses.

I will try and bring out the main features of such an organisation by a description of such a school as I conceive it. It is to offer a practical demonstration of village life under improved conditions, under which the student will live and have his being with a degree of intimacy that will render those conditions a normal

* A boarding secondary school of the present type costs approximately Rs. 60 per annum for each pupil.

part of his existence. Now the essence of village life is the family living as a unit cultivating a certain area—greater or less according, in part, to the circumstances of the family, but in part also, according to the locality. Thus the holdings in the east are, on the average, much smaller than those in the west of the provinces, and allowance will have to be made for such divergencies. The school will now represent a village, the unit of communal life, composed of families, the unit of private life. Assuming a middle school with a five years' course and the maximum age 17 or 18, the students of the senior class will each represent the heads of the families which will be made up of, roughly, one student from each year, giving in all five members to each family. The school will have approximately sufficient land to provide for each "family" of five students an area, roughly, equal to the average holding of the locality. In this community the headmaster and his assistants will play the rôle of the zamindar and his agents. He will apportion the farm lands among the "families," issuing yearly leases at reasonable rents, and the "family" will then cultivate the land under his directions, actually performing the operations themselves. The next year a re-arrangement of students in the "family" necessitated by the head leaving and by the introduction of new admissions, combined with a redistribution of leases, will give ample opportunity for arranging that each student will obtain practical experience, during his period of residence of each of the crops cultivated.

Before passing to the strictly educational aspect of the course, we may consider this proposal in some further detail. I have said the headmaster will play the rôle of zamindar; he will, if the scheme is to attain its full development, have to play many parts. As zamindar, I have stated, he will issue leases at reasonable rents. It is not proposed that these rents should necessarily be paid. The headmaster should also organise the school as a co-operative society, of which the individual heads of families are members, and from which the rent can be advanced. Reality can be given by the payment of a nominal sum by each "head" for membership, but the rent and most other transactions, being dues to the headmaster, may be book entries merely. Produce would be similarly pooled for disposal on co-operative principles, and may even be used to supply a co-operative store to supply the necessities of life of the students. If payments be actually made by each student or by each "head," a nominal bonus may be given, otherwise the transactions will, throughout, be nominal as regards cash values, but in all respects should conform with reality. Thus, the amount shown to the credit of a "family" for produce received should be based on the actual sum for which the produce was disposed.

The above constitutes what I may term the environmental aspect of the school; the educational aspect may now be considered.

This is an aspect which, more than any other, suffers from the danger of dogma, and in the present case it in no way differs from the general problem as it appears in all educational institutions. It is a problem to which each individual will offer a different solution depending on his particular personal bent. Such solution as I shall offer is, therefore, of necessity so coloured. Education as found in this country fails in two directions—the first, practicality; the second, accuracy. With the former I have already dealt; the whole organisation of the environment is aimed at developing this character. The latter must be developed in the class-room. For this purpose the following subjects seem best fitted: mathematics, associated with which may be book-keeping and accounts, and elementary physics. With these subjects emphasised, the remainder of the course will be composed of those subjects which form the basis of the curriculum of the ordinary school, preference being given to subjects which have some association with the life the students lead. Care, however, must be taken to teach each as a balanced subject without undue prominence given to their supposed practical aspects. Among such subjects I should place English, geography, physiography, and elementary studies of plant-life. In the above course—and it is not desirable to go into greater detail at present—my main object being to develop principles rather than detailed schemes, the only direct point of contact between the environmental and educational sides of the school lies in the accounts, for which the books of the institution may well be used to provide practical examples. A comparison of this outline with, for instance, the curriculum of the Loni School, will bring into prominence the difference I have tried to emphasise.

A pupil taking five years to pass through such a course would thus gradually imbibe the practical aspect of agriculture; would be gradually introduced to those conditions which tend to place the cultivator in a position of sturdy independence and self-reliance, and should, by the end of his school career, be fitted to return to his home and the reality of life with a sense educated to realise the more backward conditions and a will to remedy them—a condition of mind and body suggestive of a career as a useful citizen. The information will, moreover, be learnt by a process of absorption from constant association, one of the essential conditions if the soundness of my contention be admitted.

There remains the question of cost, the question whether the scheme will satisfy the second or financial consideration, which it must do if it is to justify the expenditure of public funds involved. With 30 students in each class, a school of 150 will be formed for which an area of 150 acres' cultivation will be required if each holding is calculated at five acres. As most of the labour will be provided by the students, the labour bill will be small and the profit on cost

of production should be considerable. In addition, there will be the capital charges and the cost of instructional staff. The former will be larger, but the latter not necessarily greater than the same charges of a school of the same standing but of the usual type. The unknown factors at the present stage are too numerous to make it possible to draw up a balance sheet which would approach with any degree of probability to the actual, but it seems more than probable that the cost would be, on the balance, low. One point at any rate is clear; unless the farm is working at a profit, and a handsome profit, it will not be fulfilling its function, and we have here, therefore, a very simple and practical test.

One point remains to be considered, and it arises from what I have said early in this article, in bringing out the difference between the coach and the teacher. However good the system is it will never succeed in producing the desired result unless the agent, in this case the teacher, is competent to develop its potentialities. The aspect requires no enlargement, as its essential nature appears to be fully recognised and formed the subject of much discussion at the Simla Conference. For the present purpose it is sufficient to point out that the supply must be derived from the Agricultural College and forms a third legitimate field, additional to the two already described, of activity for the college.

The proposals outlined above constitute a scheme for providing for the educational needs of the largest section of the community, and, as far as considered, suffices for the main educational function, to fit the average youth for a useful and contented life in the conditions under which he was born. There remains the second aspect, without which no educational system can be considered complete, that of providing a ladder by which those intellectually qualified can arise. If such a ladder is to be provided, it follows that a system of secondary schools leading to the University or to the Agricultural College must be introduced. On this subject the Simla Conference showed considerable diversity of opinion, and the probability is that the exact direction in which this will develop cannot be forecasted with any degree of certainty, and will depend on the exact form of school that is found to succeed. I will content myself with noting a single point. The type of school I have outlined contemplates the performance of the field-work by the pupils, each holding possessing a body of pupil labourers of decreasing age. If such a scheme is to succeed, and the practical work is to be carried out with that efficiency which will alone ensure success, the oldest pupils must have attained a physical development enabling them to do the more arduous field labour. That consideration would seem to indicate that greatest efficiency will be developed in those schools where the age-limit is relatively high, and hence that the type is best adapted to schools of the secondary class. The absence of the

necessary physical power in the students of the Loni School was one of the points that struck me most forcibly in the one visit I was privileged to make to that school. It would appear possible that schools of this type would lead directly to the college, and that the ladder we desire would be provided in this manner. The truth is that the practical difficulties, not the least of which is the absence of teachers, are such that the development of such schools must be slow and will afford ample opportunity for gaining practical experience. It is not desirable, therefore, at the present time to enter in too great detail into such matters. It is essentially a case for trial and experiment, the establishment of a few schools of the type described and their gradual extension in that direction which experience shows to be most desirable. What is essential is a clear comprehension of the fundamental principles which underlie the problem—a comprehension so sharp that it can be used as a test during each stage in the experiment. To the best of my ability I have attempted to supply the materials for such a test.

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